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Title/grade level/year

format

item #

price

CAREERS

Great Achievements in Mechanical Engineering of the 20th Century

23 minutes/2002
Level: Grades 5-8

½" VHS

004.0-12V

\$15.00

The video investigates, with use of archival photos and video, the development of the automobile, the Apollo moon landing, power generation, agricultural mechanization, the airplane, the integrated circuit, air conditioning and refrigeration, CAD/CAM and CAE technology, bioengineering, and codes and standards. The companion website <http://www.asme.org/education/precollege/achieve/> provides teachers with on-line lesson plans and activities related to each of the ten achievements. Hand-outs allow students to learn about each achievement, and also do a hands-on activity related to it. These lessons have been developed to augment the video, but also serve as stand-alone materials for the middle school classroom. All lesson plans are linked to relevant teaching standards in mathematics, science, and technology, so teachers can easily coordinate activities with curriculum requirements.

CAREERS Subject Area Value Pack Module

Item #004

\$16.00

Careers Print/Poster Pack
Gate to Gate CD-ROM
Great Achievements in Mechanical Engineering of the 20th Century

CAREER/SPACE SCIENCE/SPANISH Subject Area Value Pack Module

Item #004 S

\$62.00

Destination Tomorrow™ 5-Part Series Videotape
Our Solar System Videotape
StarGaze: Hubble's View of the Universe DVD
Sun-Earth Day Kit Print/Poster
Winning: Aerospace- The Next Decade Videotape

Our Subject Area Value Pack Modules include everything you need to teach a unit. Many include videotapes, CD-ROMs, educator guides, slides, and more! Subjects such as careers, earth science, geography, history of flight, life science, mathematics, physics, science & technology, and space science are available. We also have modules specifically for Spanish materials and for the elementary grades. Items in modules are discounted and a free gift is included in each module. For complete descriptions of individual programs visit our website at <http://core.nasa.gov>



Career/Space Science/Spanish
Subject Area Value Pack Module

EARTH SCIENCE

The Adventures of Echo the Bat

Level: Grades K-4/2001

Publication

300.1-06P

\$6.00

This picture book of Echo the Bat teaches the concepts of remote sensing throughout a story of a young bat lost in Arizona. Pop-up images are incorporated into the satellite images to assist the child in recognizing land features narrated in the story. The book is accompanied by a set of activities that reinforce four basic themes or concepts fundamental to the interpretation of satellite imagery: perspective, shape and pattern, color, and texture. Activities and activity sheets are also provided on a companion web site: <http://imagers.gsfc.nasa.gov/k-4/index.html>

At Work in the Ocean

2002

CD-ROM

400.1-45

\$5.00

Level: Grades 5-8

This CD contains material created during a series of live interactive Internet events and from education and outreach material developed during the 1999 and 2000 field seasons of the National Geographic Society's Sustainable Seas Expeditions. The three curriculum units on this CD feature clips, Web chat Q&A, labs, activities, and related resource materials. The units have also been mapped to National Science Education Standards, California, Texas, and Florida science standards. The units are: Monitoring a Habitat - Introduces your students to the importance and complexities of regular monitoring of our underwater world. Tools for Exploring the Ocean — An overview of the different ways that we monitor and explore the ocean. Oceanography Careers — Provides a fun and informative overview of the vast array of work that is done on and in the ocean.

Windows: Intel Pentium processor or compatible (300MHz minimum, 500+MHz preferred) Windows-compatible sound card (3D accelerator preferred), Windows 95, Windows 98, Windows NT 4, or later (operational under Windows 2000 and Windows ME with software rendering mode), Adobe Acrobat Reader, QuickTime (4.0 or later version), 24 MB RAM required, 130 MB hard disk space required (full VISS installation). Macintosh: PowerPC (G3 processor preferred) OS 8.5.1 or later (OS 9 preferred), Adobe Acrobat Reader, QuickTime (4.0 or later version; please allocate 10 MB of memory for better performance, ATI Rage 128 video card preferred (3D accelerator recommended but not required), 64 MB RAM required.

Atmospheric Detectives: ATLAS 2 Teacher's Guide with Activities

EP285/11-92

Book

300.1-29P

\$6.00

Level: Grades 5-8

Can you imagine doing a science project in space? This is the challenging and exciting situation that researchers experience in Spacelab, the laboratory carried inside the Shuttle. Here, hundreds of kilometers above Earth's surface, the crews of the ATLAS missions scan, probe and measure concentrations of chemicals and water vapor in Earth's protective bubble. Because the health of the atmosphere is of vital importance to all Earth's inhabitants, everyone should be part of this investigation. You can be active participants in exciting and vital activities; recycling and practicing other conservation methods and gathering information to learn more about how you can keep our atmosphere healthy now, as students and in the future as informed citizens, scientists, technicians and mathematicians.

The Asian Monsoon and Data Assimilation

EC-2002-03-006-GSFC/2002

CD-ROM

400.1-47

\$5.00

Level: Grades 9-12

This interactive, student-centered CD-ROM for studying global climate patterns focuses on the Asian monsoon season. Students are guided through an investigative journey studying weather and climate patterns and their effects on the local and world environments. The CD-ROM contains complete teacher, student and resource guides (.pdf) for high school audiences and a Data Visualizer with 4,000 data graphs. A presentation of how the Asian monsoon is studied through Data Assimilation contains 7 QuickTime movies of data and scenes from Asia. Recommended for: High school. For more information, visit their web site at http://dao.gsfc.nasa.gov/sci_highlights/monsoon_cd

Macintosh: Power Macintosh 7100 or greater, 12Mb RAM, 2x CD-ROM and QuickTime 4.0 (included on the CD). Standard PC: Pentium preferred with at least 16Mb of RAM, CD-ROM, QuickTime 4.0 (included on CD) for Windows, for use with Windows 95 and Windows NT.

City Night Lights Poster

Level: Grades 9-Adult/2002

Poster

300.1-18P

6.00

The student will be able to interpret Earth System Science satellite imagery and explain the relationship between urban development, geography and the global eco system. The student will be able to apply knowledge of satellite urban imagery to additional interdisciplinary learning activities within science, math, geography, social studies and technology. A world atlas map is recommended to be used with this learning tool. This wonderful poster of the world shows population and energy usage. Includes information on the back of the poster from our Mission Geography program. Excellent for framing.

Changing Climate: Global Systems Science Student Guide

Level: Grades 9-12/2000

Student Guide/Book300.1-30P

\$6.00

Changing Climate addresses the controversial question of how human activities may be changing Earth's climate. It takes students on a "field trip" to Mauna Loa Observatory where they see how scientists have measured carbon dioxide in the Earth's atmosphere since 1957. They graph and interpret data from Mauna Loa and other observatories which led to the prediction, in 1988, that changes in our atmosphere will cause the entire globe to gradually warm up. They also measure carbon dioxide in the laboratory to find out how much is contained in a sample of human breath and car exhaust. The Guide goes on to show how the discoveries at Mauna Loa have been challenged by other scientists in the early 1990's, and discusses the consensus of opinion about global climate change that finally emerged in 1995. The guide identifies scientific questions which still remain unanswered, and involves students in thinking about the economic, political, and ethical implications of regulating human activities to reduce the likelihood of global climate change.

Discover Earth: Ozone Classroom Materials for Precollege Teachers

Level: Grades 5-12/2002

1-ALPHA-422

300.1-19P

6.00

Discover Earth is a NASA-sponsored project for teachers of grades 5-12, designed to: enhance understanding of the Earth as an integrated system, enhance the interdisciplinary approach to science instruction, and provide classroom materials that focus on those goals. The Discover Earth classroom materials focus on the Earth system and key issues of global climate change including topics such as the greenhouse effect, clouds and Earth's radiation balance, surface hydrology and land cover, and volcanoes and climate change.

EOS Science Plan Book w/CD-ROM and Global Change Media Directory and MOPPITT Guide

NP-1999-01-006-GSFC/2001

MAC/WIN

400.1-40

\$5.00

The Earth Observing System (EOS) Science Plan is the product of leading scientists around the world who are participating in NASA's ESE/EOS program. The purpose of the Plan is to state the concerns and problems facing Earth Science today, and to indicate contributions that will be made toward providing solutions to those problems, primarily through the use of satellite-based observations that will be obtained with EOS satellite and instruments. Within this publication, the reader will find types and quality of data that will be produced from the satellite observations, how they will improve over existing measurement and how the data will be applied to solving the problems described.

Earth and Mars: As Different As They Are Alike

Folded Poster/2002

NW-1999-01-001-GSFC

300.1-37P

\$6.00

Interest in Mars, the fourth planet from the Sun, began long before people were able to send spacecraft to the Red Planet. Even early astronomers were able to see Mars' brightness and position changes in the sky. With the invention of powerful telescopes, scientists were able to see the surface of Mars for the first time. Today, we send robotic missions to Mars to study its surface. These missions have shown us that Mars' solid surface is much like that of Earth. Mars missions will launch about every two years, to gain a better understanding of Mars' geologic history and search for evidence of past or present life. Attention Teachers: This wallsheet presents summaries of classroom-appropriate activities to help students grasp basic concepts about Earth and Mars and their place in the Solar System. The full lesson plans with student pages are available online at <http://mars.jpl.nasa.gov/classroom/teachers.html>. Mars images can be found at <http://photojournal.jpl.nasa.gov> and <http://mars.jpl.nasa.gov/gallery/index.html>. Most of the Mars images on this poster were taken by the Mars Orbiter Camera (MOC) on the Mars Global Surveyor (MGS) spacecraft, and can be found at <http://www.msss.com>.

Earth As A System

Poster/2000

EB-2000-01-129-HQ

300.1-35P

\$6.00

This classroom component is a result of the Discover Earth workshop and translates the educators' research experience and workshop science content into materials that can be broadly shared and used with colleagues worldwide. The authors encourage the use of the Discover Earth materials by providing substantial background information, linking the classroom activities directly with daily life and ensuring that the activities respond to national science standards.

EARTH SCIENCE Subject Area Value Pack Module**Item #002****\$54.00**

Adventures of Echo the Bat Publication
 Earth Science Elementary Publication Packet
 Earth Science Middle School Publication Packet
 Fragile Earth Slide Program
 Geomorphology From Space CD-ROM
 LTL: The Atmosphere Below Videotape
 NASA CONNECT™ Measurement of All Things Videotape
 The Real Reasons for Seasons Book w/CD-ROM
 Visit to an Ocean Planet CD-ROM

Our Subject Area Value Pack Modules include everything you need to teach a unit. Many include videotapes, CD-ROMs, educator guides, slides, and more! Subjects such as careers, earth science, geography, history of flight, life science, mathematics, physics, science & technology, and space science are available. We also have modules specifically for Spanish materials and for the elementary grades. Items in modules are discounted and a free gift is included in each module. For complete descriptions of individual programs visit our website at <http://core.nasa.gov>

EOSDIS From Photons to Tools for Farming, Water Resources

Level: Grades 5-12/1998

EW-1998-10-011-GSFC

300.1-20P

6.00

The Earth Observing System Data and Information System is an integral part of NASA's Earth Observing System (EOS). EOS, in turn, is a major component of NASA's Earth Science Enterprise. EOSDIS is the robust distributed system that processes, archives, and manages Earth Science satellite and field data, and distributes this data to a diverse global user community. Over 700 atmospheric, oceanographic and land process studies, as well as global biosphere disciplines. Most of these data products are well suited for long-term global climate studies, and many are suitable for regional small-scale applications. All data products are fully supported with documentation and technical user support. Poster shows an Earth image, synthesized from four remotely sensed data layers: visible light reflection over land, fires over land, aerosols over the oceans, and infrared cloud images from four geostationary satellites.

Earth Observing System

Folded Poster/1999

NW-1999-01-001-GSFC

300.1-34P

\$6.00

Poster highlights images of the Earth, including the Pacific ocean using sea surface height measurements derived from the U.S. French TOPEX/POSEIDON satellite. There is also a "false color" view of the Earth, produced using visible and infrared data from the NOAA GOES-8 Satellite. White areas indicate cloud patterns; bodies of water in blue; and land masses are green to tan indicating varying amounts of vegetation. Additionally, on the back of the poster flights are listed by year with their objectives and applications from 1997 through 2003.

Exploring Earth From Space

Level: Grades 5-12/2002 Litho Set

LS-2002-12-003-HQ

300.1-36P

\$6.00

Shuttle astronauts and the ISS EarthKAM program provide photos of our planet from the unique perspective of Earth orbit. This resource can enhance students' studies of Earth and space science, geography, social studies, mathematics, and educational technologies. The set contains an educators' guide, student information and worksheets, and several Earth photos taken from the Space Shuttle. Includes 14 lithos: ISS EarthKAM Photography; Earth Features Seen from Space; Analusia, Spain; Buenos Aires, Argentina; Cloud Patterns; Colorado River; Creative Agriculture in Response to Limited Water; Ganges River Delta; Gazankulu Homeland, South Africa; Nile River Delta; Northeast Coast of Australia; Rio Salado, Argentina; San Jose, California; and the Tibetan Plateau.

From the Top of the World to the Bottom of the Food Web Poster

Level: Grades K-12/2002

Folded Poster 300.1-25P
EW-2002-3-3006-GSFC

6.00

NASA's ocean color satellite instruments are more sensitive than the human eye, surveying our global oceans in a few hours. But what are they sensing: Plants? Animals? Something else? Why does ocean color vary in time and place? Can we detect whether microscopic marine organisms are potentially harmful? Discover more about the connections between marine ecology, light's behavior in ocean water and satellite observations. The back of the poster includes activities and web site referrals for more information.

GLOBE Program Overview

2001

Level: Grades 6-12

CD-ROM
MAC/WINDOWS '95

400.1-42

\$5.00

The GLOBE Program Introductory Series CD-ROM is a sampling of a few GLOBE videos, specifically a long and short version of the Program Overview, Water Transparency (a sample science protocol video), and Earth as a System (an educational video). Partners and Program staff use the collection for outreach and promotional purposes.

GLOBE Earth System Science Poster and Activity Guide

GLBE-02-012-0000/1999

Level: Grades 6-12

Folded Poster 300.1-10P
Activity Guide

\$6.00

The poster represents visual data collected from satellites, ground based observations, and model predications representing solar energy, average temperature, cloud cover, precipitation, soil moisture and vegetation over a 12-month period in 1987. The poster and the associated learning activities enable students to use the data to explore ideas about the environment and gain an understanding of the Earth as a system. The set is distributed to teachers participating in GLOBE workshops and may also be viewed on the GLOBE website: www.globe.gov. All K-12 teachers are welcome to participate in The GLOBE Program. Information about this international hands-on education program and training workshops is available on-line at <http://www.globe.gov>.

GLOBE 5-Part Video Series

5 ½ hours/2001

Level: Grades 6-12

½" VHS

002.2-28V

CLOSED CAPTIONED

\$48.00

The GLOBE Program is a worldwide network of K-12 students who conduct valid Earth science observations at or near their schools under the guidance of GLOBE-trained teachers. Findings are reported via the Internet to a central database. Scientists use GLOBE data in their research and provide feedback to the students to enrich their education. Maps and graphs based on GLOBE student data are created on the Web site. This feedback provides "real life" material for student inquiry. GLOBE observations and measurements are in the following study areas: atmosphere, hydrology, land cover, soils, global positioning system (GPS), and phenology/land cover. GLOBE 5-Part Series Includes the following programs:

Program 1:

GLOBE Special Topics
GLOBE Program Overview
Earth as a System
Data, Process & Flow
Student Inquiry
GLOBE Program Overview Short Version

Electrical Conductivity of Water
Dissolved Oxygen
Salinity
Alkalinity
Nitrate

Program 2:

GLOBE Atmosphere Protocols
Maximum, Minimum & Current Temperature
Rainfall, Solid Precipitation & Precipitation PH

Program 4:

GLOBE Soil Protocols
Soil Characterization: Field Measurements
Soil Characterization: Lab Measurements
Soil Temperature
Soil Infiltration
Soil Moisture

Program 3:

GLOBE Hydrology Protocols
Water PH
Water Transparency

Program 5:

GLOBE Land Cover Protocols
Land Cover
Land Cover Manual Mapping
Land Cover Computer Assisted Mapping
Remote Sensing

Greenhouse Effect/Earth's Energy Balance Brochure

Level: Grades 9-12/1997 NP-1997-01-003-GSFC 300.1-31P \$6.00

The "greenhouse effect" is the warming of climate that results when the atmosphere traps heat radiating from Earth's surface. Certain gases in the atmosphere resemble glass in a greenhouse, allowing sunlight to pass in to the "greenhouse", but blocking Earth's heat from escaping into space. Earth's energy balance is also discussed in this tri-fold brochure. Packaged to include 10 brochures.

Hurricane Andrew Poster

Level: Grades 9-12/1997 NW-1997-10-006-GSFC 300.1-22P 6.00

Wonderful four-color poster of Hurricane Andrew. Hurricanes are large weather systems with strong winds rotating around a calm center, the eye. Most hurricanes that affect the continental United States form in tropical waters near the equator. A hurricane starts as a tropical storm that gains heat energy and moisture as it drifts northward over the warm waters, such as those of the Caribbean Sea of the Gulf Stream. When its sustained winds reach 74 mph, the storm is classified as a hurricane. A hurricane is fed by warm ocean waters, so once it starts to cross land, deprived of heat and energy and dragged apart by friction, the storm dissipates, but often not until it has caused massive destruction to people and property. You and your students can learn interesting facts from the information on the back of the poster: Highs and Lows of Forecasting, The Scale of a Storm, Storm Surge and Power of a Hurricane.

Looking at Earth From Space: Glossary of Terms

Level: Grades 5-12/1994 EP-302 8/94 300.1-33P \$6.00

Materials have been developed to familiarize educators with global change issues and to enhance classroom studies using satellite images. In this book, you will find a glossary of concepts and terms relevant to Earth science, remote sensing and direct readout.

NASA Science Files™: The Case of the Shaky Quake

60 minutes/2002 ½" VHS 002.3-06V \$16.00
Level: Grades 3-5 CLOSED CAPTIONED

The tree house detectives are concerned about a tremor that they felt while working in the tree house. Unsure if they had just experienced an earthquake, they decide to call a seismologist to find the answer. They soon realize that it isn't that simple. As the detectives begin their research, they stop by to see Dr. D, who provides them with information on the various layers of the Earth and how fossils help scientists discover the Earth's movement. Dr. D also tells them to think "outside of the box" because the answer is not always obvious. Jacob is on vacation in Utah and visits David Whitman at Dinosaur National Monument to gather some important clues and to learn about the continental drift theory and plate tectonics. Produced by NASA Langley Research Center's Office of Educational Programs. For additional information, visit their web site at <http://scifiles.larc.nasa.gov>

New World View: Global Systems Science Student Guide, A

Level: Grades 9-12/1999 EP-1999-01-390-HQ 300.1-21P 6.00

Global change. Sustainability. Integrated science. How humans impact our global environment. These are core ideas of Global Systems Science—an integrated science course for high school students. A New World View is the introductory volume in this series. Global systems science is a new field of study about the interactions between Earth's natural systems and human activities. The people who study global systems science draw on methods and theories of many different fields—from chemistry and biology to economics and politics—in order to predict how today's actions are likely to affect the world of tomorrow—our world and our children's world.

Our Home: Earth From Space

22 minutes/2002 ½" VHS 002.2-31V \$15.00
Level: Grades 9-12 CLOSED CAPTIONED

Two student moderators engage the audience with satellite imagery, newly developed computer graphics, and historical footage to make the point that the Earth is an interconnected system of air, land, water and life. The content is based on current space-based research and supports the Earth system science curriculum at: <http://education.gsfc.nasa.gov/aacps> NASA's Earth Science Enterprise produced this video for use in an introductory Earth system science course (grades 9-12). It has segments on: 1. An introduction to Earth system science (2:47), 2. Using satellites to look at Earth from space (4:19), 3. El Niño (4:14), 4. Global Warming (5:07), 5. Drought (2:23), 6. Hurricanes (2:03), and 7. An epilogue (1:06).

Ozone/Nimbus-7 Total Ozone Mapping Spectrometer

Level: Grades 9-12

1-ALPHA-377.1 300.1-23P

6.00

Folded Poster

The images on the poster show measured total ozone levels over the Earth for each month from November 1978 to April 1993. The measurements were taken by NASA's Total Ozone Mapping Spectrometer (TOMS) aboard the Nimbus-7 satellite. The color scale at the bottom shows the amount (sum of all the ozone in a vertical column through the atmosphere) in Dobson units. Normal to high ozone levels are indicated by the colors green, yellow and red, respectively. Blue and purple indicate low to very low ozone concentrations. The individual images have been rotated each month in order to show the polar region in the Spring of each hemisphere. This is the season when the most dramatic ozone depletion occurs. Includes 9-panels of information on the back of the poster with information and classroom activities.

Studying Earth's Environment From Space

EC-2002-04-007-GSFC/2002

CD-ROM

400.1-46

\$5.00

Level: Grades 9-12, Undergraduate

This material consists of four modules: Stratospheric Ozone; Global Land Vegetation; Oceanography; and Polar Sea Ice Processes. The modules are designed to increase the use of satellite data in science classrooms by providing lecture materials in HTML for the classroom (including full-color, printable graphics) that are linked to guided-inquiry computer exercises. The current software package used for the computer exercises is a modified version of the Macintosh platform's NIH-Image. This software, called SEE Image, also has been tested and runs on a PC that is equipped with a Macintosh emulator. Recommended for: High school— undergraduate. For more information, please contact their web site at <http://see.gsfc.nasa.gov/edu/SEES>

UARS: The Upper Atmosphere Research Satellite

17 minutes/2001

1/2" VHS

002.2-26V

\$15.00

Level: Grades 9-12

NASA's Upper Atmosphere Research Satellite (UARS) was launched on September 12, 1991, from the Space Shuttle Discovery (STS-48). UARS studies the physical and chemical processes of the Earth's stratosphere, mesosphere, and lower thermosphere. Four instruments (CLAES, ISAMS, MLS, HALOE) measure atmospheric composition and temperature, two instruments (HRDI, WINDII) observe atmospheric winds, and three other instruments (SOLSTICE, SUSIM, PEM) measure the energy inputs from solar radiation and charged particles. A tenth instrument (ACRIM II) will take advantage of a flight of opportunity to continue NASA's solar constant measurements. UARS continues to observe the stratosphere with 8 of its 10 instruments still operating.

EARTH SCIENCE/Weather

EARTH SCIENCE – WEATHER Subject Area Value Pack Module

Item #002.3

\$35.00

NASA CONNECT™ Plane Weather Videotape
 NASA "Why?" Files Case of Mysterious Red Light Videotape
 The Real Reasons for Seasons Book w/CD-ROM
 SOHO Portfolio of Images Litho Set

Our Subject Area Value Pack Modules include everything you need to teach a unit. Many include videotapes, CD-ROMs, educator guides, slides, and more! Subjects such as careers, earth science, geography, history of flight, life science, mathematics, physics, science & technology, and space science are available. We also have modules specifically for Spanish materials and for the elementary grades. Items in modules are discounted and a free gift is included in each module. For complete descriptions of individual programs visit our website at <http://core.nasa.gov>

NASA CONNECT™ Data Analysis and Measurement: Having a Solar Blast!

29 minutes/2002

1/2" VHS

012.0-17V

\$10.00

Level: Grades 5-8

CLOSED CAPTIONED

NASA engineers and researchers use data analysis and measurement to predict solar storms, anticipate how they will affect the Earth, and improve our understanding of the Sun-Earth system. For more information, visit their web site at <http://connect.larc.nasa.gov>

NASA Science Files™

The Case of the Mysterious Red Light

60 minutes/2001

1/2" VHS

002.3-04V

\$16.00

Level: Grades 3-5

CLOSED CAPTIONED

In "The Case of the Mysterious Red Light," the tree house detectives accept the challenge of trying to find the cause of the unusual red sunrises and sunsets in their community. They use scientific inquiry and Problem-Based Learning to learn about light, volcanoes, and weather. The tree house detectives get a little help from the famous magician, Franz Harrary who helps them to understand that "seeing is not always believing!" A NASA "Why?" Files Kids' Club third grade classroom in Hampton, VA tells the tree house detectives about the three types of volcanoes, giving them a valuable clue to the mystery of the red sunrises and sunsets. Community experts and NASA researchers also help the tree house detectives "dust off" their thinking caps to realize that the case may "erupt" before their very eyes.

NASA Science Files™

The Case of the Phenomenal Weather

60 minutes/2002

1/2" VHS

002.3-05V

\$16.00

Level: Grades 3-5

CLOSED CAPTIONED

Join the tree house detectives as they plan a trip to the Caribbean and encounter problems trying to predict the weather. In this case, the tree house detectives will learn about violent storms such as hurricanes and tornadoes, weather fronts, global wind patterns, and climates. While solving the case, they will discover that predicting the weather is not predictable at all! For more information about this program and others in the series, please visit their web site at <http://whyfiles.larc.nasa.gov>

Sea Winds: Catch the Wind, The Quik SCAT Story

26 minutes/2001

1/2" VHS

002.2-27V

\$16.00

Level: Grades 9-12

CLOSED CAPTIONED

The Quik Scat mission was developed rapidly following the premature demise of ADEOS. The Sea Winds instruments are follow-ons to the NASA scatterometer (NSCAT), which flew on NASDA's Advanced Earth Observation Satellite (ADEOS) from August 1996 until the failure of the ADEOS spacecraft in June 1997. Quik Scat was launched on June 19, 1999 and is expected to operate for at least two years, overlapping the launch and validation of the Sea Winds instrument on ADEOS-II. The Sea Winds/ADEOS-II mission will operate for 3 years after launch with a 5-year lifetime goal. The Sea Winds instruments are designed to acquire accurate, high-resolution, continuous, all-weather measurements of global (land, ice, and ocean) radar cross-section and near-surface vector winds over the ice-free global oceans. As the only instruments capable of measuring wind velocity-both speed and direction-under all-weather conditions, Sea Winds data is crucial for studies of tropospheric dynamics, upper-ocean circulation, and air-sea interaction. Sea Winds data will also be provided in near-real-time to the U.S. National Centers for Environmental Prediction (NCEP) for use in global and regional operational weather prediction.

Space Weather: Exploring Sun-Earth Connections

2001

Level: Grades 4-12

CD-ROM

MAC/WIN

400.1-41

\$ 5.00

Space weather is a term that is frequently used to describe the interaction between the Sun and Earth. These interactions can be as benign as a beautiful aurora, or as devastating as an electrical power blackout, the loss of a million-dollar satellite, or even radiation exposure to astronauts and airline flight crews. For more information visit their web site at <http://image.gsfc.nasa.gov>

TOPEX/POSEIDON: Revealing Our Ocean Planet

Level: Grades 9-12/1997

JPL 400-653 7/97

300.1-32P

\$6.00

Viewed from space, the oceans give Earth its "blue marble" appearance, setting our planet apart from all others in the solar system. This cloak of life-giving water that covers more than 70 percent of Earth's surface area controls our planet's climate. Studying the oceans, scientists are using TOPEX/POSEIDON satellite data to learn how heat from the Sun is transported around the globe by ocean circulation patterns. Researchers now have an improved understanding of the role of the oceans in controlling seasonal variations and longer term climate changes. TOPEX/POSEIDON data are also used for operational purposes, such as monitoring eddies and their impact on human activities and marine life. This 4-color booklet highlights: climate; seasons; wind, waves and weather; eddies; el nino; kelvin and rossby waves; the oceans from space and the satellite.

ELEMENTARY**ELEMENTARY Subject Area Value Pack Module****Item #006.3****\$43.00**

Earth Science Elementary Publication Packet
 LTL: Living in Space Videotape
 NASA "Why?" Files Case of the Unknown Stink Videotape
 Our Solar System Videotape
 Solar System Litho Set
 Space Food and Nutrition Educator's Guide

Our Subject Area Value Pack Modules include everything you need to teach a unit. Many include videotapes, CD-ROMs, educator guides, slides, and more! Subjects such as careers, earth science, geography, history of flight, life science, mathematics, physics, science & technology, and space science are available. We also have modules specifically for Spanish materials and for the elementary grades. Items in modules are discounted and a free gift is included in each module. For complete descriptions of individual programs visit our website at <http://core.nasa.gov>

GEOGRAPHY

Atlas of the Ocean: The Deep Frontier Teacher's Guide

(to accompany National Geographic Atlas of the Ocean Hardcover Book)

ISBN 068401512-9/2002

Book

300.1-28P

\$6.00

Level: Grades 5-12

This 30-page guide features classroom activities that feature content taken from National Geographics' "Atlas of the Ocean: The Deep Frontier". Each activity in the guide takes the student on an underwater adventure exploring our oceans. Subjects include undersea hot spots, underwater archaeology, bioluminescence, coral reefs, and polar sea exploration. This colorful book of maps, charts and deep sea images also features black line maps that will allow your students to plot their own findings and notes of discovery. Recommended for middle-high school geography education.

GEOGRAPHY Subject Area Value Pack Module

Item #008

\$28.00

LTL: Geography From Space Videotape
Mission Geography CD-ROM
Underground Railroad Videotape

Our Subject Area Value Pack Modules include everything you need to teach a unit. Many include videotapes, CD-ROMs, educator guides, slides, and more! Subjects such as careers, earth science, geography, history of flight, life science, mathematics, physics, science & technology, and space science are available. We also have modules specifically for Spanish materials and for the elementary grades. Items in modules are discounted and a free gift is included in each module. For complete descriptions of individual programs visit our website at <http://core.nasa.gov>

Mission Geography

2002

CD-ROM

400.1-37

\$5.00

Level: Grades K-4, 5-8, 9-12

MAC/WINDOWS '95

Mission Geography has learning modules designed to link the content, skills, and perspectives of geography with NASA's missions and results at three grade levels: K-4, 5-8, and 9-12. The key skills and techniques of geography and other sciences are used in each module to model the approaches used by scientists to explore Earth from both the ground and from space. Each module is divided into individual investigations and is supported by a web site, <http://missiongeography.org>

Mac Power PC (OS 7.5.3 or later for Acrobat) with 6 MB of RAM for Acrobat or i486, or Pentium processor-based personal computer with CD-ROM drive (Windows 95 or later) with 16 MB RAM for Acrobat, or modules may be downloaded by investigations in PDF format from <http://missiongeography.org>



HISTORY OF FLIGHT

HISTORY OF FLIGHT Subject Area Value Pack Module

Item #001

\$86.00

Aeronautics Print/Poster
 Exploring Aeronautics CD-ROM
 Milestones of Flight Videotape
 Milestones of Flight Slide Program
 NASA CONNECT™ Measurement, Ratios, & Graphing
 NASA Science Files™ Case of the "Wright" Invention
 Rockets Educator Guide
 Transformations of Flight Videotape
 Transformations of Flight Slide Program
 X-15 The NASA Mission Reports Book w/CD-ROM



Our Subject Area Value Pack Modules include everything you need to teach a unit. Many include videotapes, CD-ROMs, educator guides, slides, and more! Subjects such as careers, earth science, geography, history of flight, life science, mathematics, physics, science & technology, and space science are available. We also have modules specifically for Spanish materials and for the elementary grades. Items in modules are discounted and a free gift is included in each module. For complete descriptions of individual programs visit our website at <http://core.nasa.gov>

HISTORY OF FLIGHT: CENTENNIAL EDITION Subject Area Value Pack Module Item #001 C

\$38.00

Celebrating a Century of Flight Publication
 Centennial of Flight VIP Packet
 Centennial of Flight CD-ROM
 Flight Testing Newton's Laws CD-ROM
 Learning to Fly Publication
 NASA CONNECT™: The "Wright" Math Videotape
 NASA Destination Tomorrow™ Videotape

Our Subject Area Value Pack Modules include everything you need to teach a unit. Many include videotapes, CD-ROMs, educator guides, slides, and more! Subjects such as careers, earth science, geography, history of flight, life science, mathematics, physics, science & technology, and space science are available. We also have modules specifically for Spanish materials and for the elementary grades. Items in modules are discounted and a free gift is included in each module. For complete descriptions of individual programs visit our website at <http://core.nasa.gov>

NASA CONNECT™

Centennial of Flight Special Edition: Problem Solving: The "Wright" Math

30 minutes/2002
 Level: Grades 6-8

1/2" VHS 001.0-14V
 CLOSED CAPTIONED

\$10.00

NASA CONNECT Series produced by the NASA Langley Research Center's Office of Education. Students will learn about the evolution of flight. They will learn how the Wright Brothers became the first human beings to successfully design, construct and fly an airplane. Students will learn the method the Wright Brother used in designing their airplane. They will also be introduced to NASA's Morphing Project, a radically new approach to designing aircraft of the future. They will observe NASA researchers using problem-solving techniques to design wings that will change their shape during flight. By conducting hand-on and web activities, students will make connections between NASA research and the mathematics, science and technology they learn in their classrooms.

NASA CONNECT™

Measurement, Ratios, and Graphing: Safety First

30 minutes/2001
 Level: Grades 6-8

1/2" VHS 012.0-19V
 CLOSED CAPTIONED

\$10.00

NASA CONNECT Series produced by the NASA Langley Research Center's Office of Education. In "Measurement, Ratios, and Graphing: Safety First," students will learn about NASA's Aviation Safety Program and how engineers are testing aircraft at extreme angles in wind tunnels to make sure they remain a safe form of transportation for all future air travelers. They will also learn about NASA FutureFlight Central, a virtual facility that simulates our nation's airports in real time, allowing air traffic controllers, pilots, and airport personnel to interact with each other and test new technologies. Students will observe NASA engineers using mathematics to predict airplane behavior and to analyze data. By conducting hands-on and web activities, students will make connections between NASA research and the mathematics, science, and technology they learn in their classrooms.

NASA Aerospace Technology Education Resource Guide: Centennial of Flight Edition

Level: Grades K-12/2002

CD-ROM

400.1-44

\$5.00

Windows/Macintosh

The NASA Aerospace Technology Education Resource Guide CD-ROM provides K-12 educators an easy and concise introduction to NASA aerospace educational resources including web sites, printed materials, television shows, videos and CD-ROMs. This interactive CD-ROM includes colorful descriptions and links to the best NASA aerospace-related educational web sites, and it contains a library of over 1500 educator guides, lesson plans, posters and more. The materials in the library are ready to print without downloading them from the Internet. Very user-friendly product to introduce students and educators to the Centennial of Flight products. For more information visit the Centennial of Flight Commission's Web Site at [http:// www.centennialofflight.gov](http://www.centennialofflight.gov)

System Requirements: Windows 95+ Pentium II or equivalent w/128 MB RAM. Macintosh 60830 processor or better with minimum 32MB of available RAM. OS 7.0+ - Internet Access.

NASA Science Files™**The Case of the "Wright" Invention**

60 minutes/2001

1/2" VHS

011.0-06V

\$16.00

Level: Grades 3-5

CLOSED CAPTIONED

When the tree house detectives hear a report on KSNM about a young inventor's contest, they decide it might be their next case. Thus begins The Case of the "Wright" Invention. The tree house detectives are not even quite sure what an invention is, much less how to create one. Seeking some advice, they visit Dr. D, a retired science professor, who helps the tree house detectives understand that the process of invention is similar to the scientific method. Armed with new confidence, they set out to create a "bug" list of ideas to find a problem to solve! As the tree house detectives learn about inventors, they get a little help from mysterious sources, Orville and Wilbur Wright. The tree house detectives are not sure whether these brothers are real or just actors. The tree house detectives also visit a young inventor, Lindsey Clements, who shows them that even kids can be inventors. NASA researchers and other community experts also help the tree house detectives learn how to plan, design, build, and test their invention. They discover that inventing is not as easy as they thought, even for Orville and Wilbur Wright. For more information visit their web site at <http://scifiles.larc.nasa.gov>

HUMAN SPACEFLIGHT: SPACE SHUTTLE PROGRAM**Shuttle-Mir: The United States and Russia Share History's Highest Stage**

Level: Grades 5-Adult/2001

WIN/MAC

400.1-38

\$5.00

This CD-ROM was originally released in September 2001 as a companion to an illustrated history book with the same title, NASA SP-2001-4225. The stand alone, searchable CD-ROM includes the full text and images in the book, as well as additional multimedia material. It further explores the Shuttle-Mir Program with more text, photos, videos, biographies, letters home from the Mir astronauts, and oral histories that explain the daily challenges faced by those working on Earth and in orbit. This CD-ROM is recommended for all those who are interested in space history. Students in junior high school and above should particularly enjoy this CD-ROM, as will their teachers and parents. CD-ROM runs on both Mac and PC computers. Produced by the NASA History Office.

HUMAN SPACEFLIGHT/SHUTTLE Subject Area Value Pack Module**Item #007.6****\$85.00**

Best of Space Shuttle Slide Program

Liftoff to Learning 16-Part Series Videotape

NASA Student Glovebox Educator Guide

Shuttle Mir CD-ROM

Space Shuttle Flight: Greatest Space Photos CD-ROM

STS 1-5 The NASA Mission Reports Book w/CD-ROM

Our Subject Area Value Pack Modules include everything you need to teach a unit. Many include videotapes, CD-ROMs, educator guides, slides, and more! Subjects such as careers, earth science, geography, history of flight, life science, mathematics, physics, science & technology, and space science are available. We also have modules specifically for Spanish materials and for the elementary grades. Items in modules are discounted and a free gift is included in each module. For complete descriptions of individual programs visit our website at <http://core.nasa.gov>

HUMAN SPACEFLIGHT/APOLLO PROGRAM

HUMAN SPACEFLIGHT/APOLLO Subject Area Value Pack Module

Item #007

\$77.00

Apollo 10 The NASA Mission Reports Book w/CD-ROM
 Apollo Moon Landing DVD
 Flight of Apollo 11 Videotape
 Moonwalk 4-Part Series Videotape
 A Salute to Apollo Slide Program

Our Subject Area Value Pack Modules include everything you need to teach a unit. Many include videotapes, CD-ROMs, educator guides, slides, and more! Subjects such as careers, earth science, geography, history of flight, life science, mathematics, physics, science & technology, and space science are available. We also have modules specifically for Spanish materials and for the elementary grades. Items in modules are discounted and a free gift is included in each module. For complete descriptions of individual programs visit our website at <http://core.nasa.gov>

LIFE SCIENCE

LIFE SCIENCE Subject Area Value Pack Module

Item #003

\$83.00

Animal Physiology in Space Videotape
 BioBLAST CD-ROM
 BioBLAST Videotape
 Microgravity Science Slide Program
 NASA "Why?" Files Case of the Unknown Stink Videotape

Our Subject Area Value Pack Modules include everything you need to teach a unit. Many include videotapes, CD-ROMs, educator guides, slides, and more! Subjects such as careers, earth science, geography, history of flight, life science, mathematics, physics, science & technology, and space science are available. We also have modules specifically for Spanish materials and for the elementary grades. Items in modules are discounted and a free gift is included in each module. For complete descriptions of individual programs visit our website at <http://core.nasa.gov>

NASA Science Files™: The Case of the Biological Biosphere

60 minutes/2003
 Level: Grades 3-5

½" VHS
 CLOSED CAPTIONED

003.1-13V

\$16.00

One of the treehouse detectives is about to take a trip to foreign shores and is both excited and concerned. This trip is a chance of a lifetime and he doesn't want to get sick and miss it. Come help the detectives learn about the human body as they discover that no man, not even a kid, is an island. The show deals with viruses, bacteria, cells, infectious disease and its spread, quarantine, immunizations, body systems, the immune system, mucus, skin, vomit and the importance of rest, exercise and proper diet.

Science in Space: Fundamental Biology on STS-107

22 minutes/2003
 Level: Grades 5-College

½" VHS
 CLOSED CAPTIONED

003.1-12V

\$16.00

The last half-century of human inquiry into the basics of life, materials, and energy has yielded an astonishing range of answers and capabilities. It also has yielded new questions that require more sophisticated investigations to understand and apply the subtle, elegant workings of the inner universe. Many investigations have been stymied by inescapable effects of Earth's gravity. But the last half-century also saw scientists start using the microgravity of orbit to turn those effects off and thus unmask basic phenomena that play key roles in biology, physics, and chemistry on Earth as well as space. STS-107 is a Shuttle mission dedicated to research investigating human physiology, fire suppression, and other areas of research relevant to people across the globe, hence the theme "Space Research and You".

LIVING IN SPACE

LIVING IN SPACE Subject Area Value Pack Module

Item #006

\$41.00

Astronaut Ice Cream
 International Space Station Print/Poster
 Living in Space Print/Poster
 Mars, What Would You Wear? Videotape
 Meet Me at the Station Videotape
 Really Heavy Pants Videotape
 Space Food and Nutrition Educator's Guide
 THAT NASA SHOW Tortillas in Space; Space Wear Video

Our Subject Area Value Pack Modules include everything you need to teach a unit. Many include videotapes, CD-ROMs, educator guides, slides, and more! Subjects such as careers, earth science, geography, history of flight, life science, mathematics, physics, science & technology, and space science are available. We also have modules specifically for Spanish materials and for the elementary grades. Items in modules are discounted and a free gift is included in each module. For complete descriptions of individual programs visit our website at <http://core.nasa.gov>

Really Heavy Pants: A Collection of Short Videos About Spacesuits and Working in Space

11 minutes/2003

½" VHS

006.3-20V

\$10.00

Level: Grades 3-Adult

CLOSED CAPTIONED

Really Heavy Pants: A Collection of Short Videos About Spacesuits and Working in Space. These 7 short videos are part of NASA engineer Phil West's presentation "It's Hard to Dance in a Spacesuit," a fun look at the suits and tools astronauts use in space. Written at about the middle school level, the videos have been used in a wide variety of audiences and age groups, mostly from the 3rd grade through professional associations. They can be used individually or as a group and are provided on one tape by popular demand. How Big Will the ISS Become? (0:11) A football player mistakes Phil for an opponent. Ouch. What Does a Vacuum Look Like? (0:23) Dropping objects in a vacuum – which will hit first? Astroburger (1:00) You're hungry and all you can think about is a burger... How about a space drive through? (Spoof commercial used to intro a topic or break up the day) Really Heavy Pants (3:38) Spacesuits 101 (the basics) in less than 4 minutes. How Would You Turn A Bolt in Space? (1:00) Hang On! – Turning a bolt has never been this fun! Martian Farmer (1:00) Martian Farmer is a miracle for your Mars garden! (Spoof commercial used to intro a topic or break up the day) Mars: What Would You Wear? (3:12) Thinking about going to Mars? Design clothes for your trip. Videotape is packaged with Suited for Spacewalking - A Teacher's Guide with Activities for Technology Education, Mathematics and Science EG-1998-03-112-HQ.

NASA CONNECT™

Festival of Flight Special: Opening Space for Next Generation Explorers

30 minutes/2003

½" VHS

006.3-21V

\$10.00

Level: Grades 6-8

CLOSED CAPTIONED

NASA CONNECT™ Series is produced by the NASA Langley Research Center's Office of Education. In this program, NASA's Space Launch Initiative (SLI) Program will ultimately move the nation from the explorations of the Mercury, Gemini, Apollo, and Space Shuttle missions to a new period of pioneering when people and businesses are more routinely traveling, working, and living in space.

LIVING IN SPACE/International Space Station

International Space Station: The Vision and Mission

8 minutes/2001

1/2" VHS

006.4-25V

\$10.00

Level: Grades 5-Adult

CLOSED CAPTIONED

Highlights a human outpost in space, an era of discovery and achievement that is unique, ambitious and visionary. The International Space Station is dedicated to the peaceful pursuit of space exploration. Through hard work, cooperation and perseverance this dream has come true. Crews from around the world are working, building, learning and paving the way to a brighter future creating a station without borders. Soar with us into the future.

International Space Station: Expedition 2000

90 minutes/2000

1/2" VHS

006.4-23V

\$10.00

Level: Grades 6-12

Students will learn about teamwork between international scientists, engineers and astronauts as they work to make International Space Station a reality. They'll learn about how studies in microgravity give us new insight on the human body and the world around us. With a diverse panel of top NASA, university and other experts, this live, interactive, ninety-minute program will put you directly in touch with the scientists, engineers and astronauts who are helping to build and use the ISS. Also includes the film clip "When You Gotta Go" by Phil West.



MATHEMATICS

MATHEMATICS Subject Area Value Pack Module

Item #012

\$32.00

NASA CONNECT™ 5-Part Series Videotape
 Space Flight: Application of Orbital Mechanics Videotape
 3,2,1..Liftoff: An Educator's Guide
 Aeronautics: An Educator's Guide
 Space Food and Nutrition: An Educator's Guide
 Rockets: A Teacher's Guide

Our Subject Area Value Pack Modules include everything you need to teach a unit. Many include videotapes, CD-ROMs, educator guides, slides, and more! Subjects such as careers, earth science, geography, history of flight, life science, mathematics, physics, science & technology, and space science are available. We also have modules specifically for Spanish materials and for the elementary grades. Items in modules are discounted and a free gift is included in each module. For complete descriptions of individual programs visit our website at <http://core.nasa.gov>

NASA CONNECT™ Functions and Statistics: Dressed for Space

29 minutes/2002

1/2" VHS

012.0-16V

\$10.00

Level: Grades 4-8

CLOSED CAPTIONED

Building on past space suit technologies, NASA engineers and researchers use functions and statistics to create the next generation of space suits for the International Space Station and beyond. Produced by NASA Langley Research Center's Office of Education. For more information, visit their web site at <http://connect.larc.nasa.gov>

NASA CONNECT™ Geometry and Algebra: The Future of Flight Equation

30 minutes/2001

1/2" VHS

012.0-18V

\$10.00

Level: Grades 5-8

CLOSED CAPTIONED

In Geometry and Algebra: The Future Flight Equation, students will learn how NASA engineers develop experimental aircraft. They will learn about the Hyper-X Research Vehicle, an experimental plane that uses scramjet engine technology to propel itself to ten times the speed of sound. Students will understand how the Hyper-X is part of the Future Flight Equation. They will observe NASA engineers using geometry and algebra when they measure and design models to be tested in wind tunnels. By conducting hands-on and web activities, students will make connections between NASA research and the mathematics, science, and technology they learn in their classrooms. For more information visit their web site at <http://edu.larc.nasa.gov/connect>

NASA CONNECT™:

Measurement, Ratios, and Graphing: Who Added the "Micro" to Gravity?

30 minutes/2002

1/2" VHS

012.0-27V

\$10.00

Level: Grades 6-8

CLOSED CAPTIONED

In Measurement, Ratios, and Graphing: Who Added the "Micro" to Gravity?, students will learn about microgravity. They will be introduced to combustion science and the importance of fire safety on the International Space Station. Students will also learn how chemistry plays an important role in microgravity research. They will observe NASA engineers and scientists using measurement, ratios and graphing to analyze data. By conducting hands-on and web activities, students will make connections between NASA research and the mathematics, science and technology they learn in their classrooms. Produced by NASA Langley Research Center's Office of Educational Programs. For additional information, visit their web site at <http://connect.larc.nasa.gov>

NASA CONNECT™ 2001-2002 9-Part Video Series

4 1/2 hrs/2002	1/2" VHS	099.23 V	\$48.00
Level: Grades 5-8	CLOSED CAPTIONED		

The NASA CONNECT™ 9-part Video Series includes the following programs:

Measurement, Ratios and Graphing: Safety First
 Geometry and Algebra: The Future of Flight Equation
 Data Analysis and Measurement: Having a Solar Blast
 Functions and Statistics: Dressed for Space
 Functions and Statistics: ISS: Up to Us
 Data Analysis and Measurement Ahead, Above Clouds
 Patterns, Functions and Algebra: Wired for Space
 Geometry and Algebra: Glow With the Flow
 Measurement, Ratios and Graphing: 3,2,1, Crash!

NASA CONNECT™ is a series of integrated mathematics, science and technology instructional distance learning programs for students in grades 5-8. Each program has three components: (1) a 30-minute television broadcast; (2) an interactive web activity; and (3) a lesson guide describing a hands-on activity. For more information, visit their web site at <http://connect.larc.nasa.gov>

PHYSICS

PHYSICS Subject Area Value Pack Module**Item #012.1****\$107.00**

Earth to Orbit: Thermal Protection Systems Videotape
 Thermal Protection Systems Kit
 Flight Testing Newton's Laws Videotape
 Microgravity Demonstrator Videotape
 Microgravity Science Slide Program
 Physics of Toys in Space Videotape
 Toys in Space II Activity Kit

Our Subject Area Value Pack Modules include everything you need to teach a unit. Many include videotapes, CD-ROMs, educator guides, slides, and more! Subjects such as careers, earth science, geography, history of flight, life science, mathematics, physics, science & technology, and space science are available. We also have modules specifically for Spanish materials and for the elementary grades. Items in modules are discounted and a free gift is included in each module. For complete descriptions of individual programs visit our website at <http://core.nasa.gov>

Flight Testing Newton's Laws: The Test Pilot Approach to High School Physics

Level: Grades 9-12	WIN/MAC	400.1-51	\$5.00
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Designed to engage high school students in Newtonian physics as it applies to the real world of flight testing aircraft. This highly interactive program is derived from the Flight Testing Newton's Laws educator guides and companion 2-hour videos coproduced by NASA and the National Test Pilots School. Using extensive narration, animation, QuickTime movies and photographs, the instructors from the National Test Pilots School guide students through 10 lessons covering Newton's three laws of motion, complementary areas of trigonometry, vector addition, weight and balance, and resolutions of forces. Many of the demonstrations were photographed in flight as the instructors control aircraft ranging from gliders to supersonic jets. Flight Testing Newton's Laws videotape is also available for \$24.00 CORE Item #012.0-25V.

Windows 95+; Pentium II or better with 128MB RAM or Macintosh 60830 processor or better w/minimum 32MB of available RAM; OS 8.6+; QuickTime 5+.

SCIENCE AND TECHNOLOGY

NASA CONNECT™: Special Edition: World Space Congress 2002: The New Face of Space

30 minutes/2003 1/2" VHS 011.0-08V \$10.00
Level: Grades 6-8 CLOSED CAPTIONED

The World Space Congress 2002 is the "meeting of the decade for space professionals." From the discovery of distant planets to medical advancements, from geological exploration to urban planning, from water on Mars to energy sources in developing nations, you'll find it all here. Students will also have an unprecedented look at how advances in space can and do improve life on Earth.

NASA DESTINATION TOMORROW™ SERIES

Program 5: Bringing the Future Into Focus

30 minutes/2001 1/2" VHS 099.35-05V \$10.00
Level: Grades 9-Adult CLOSED CAPTIONED

The fifth program in the Destination Tomorrow™ Series. Produced by the NASA Langley Research Center's Office of Education. This program of Destination Tomorrow communicates knowledge resulting from NASA's aeronautics and space technology programs. NASA researchers discuss new and developing technologies that will benefit current and future generations. You will learn how NASA looks to the future of flight with the revolutionary airplane design with a blended wing body, engineers intentionally crash aircraft to unlock the secrets of safety and a retired NASA engineer helps men achieve supersonic flight at over 4,500 miles per hour. Excellent resource for high school and adult learners.

NASA DESTINATION TOMORROW™ SERIES

Program 6: Bringing the Future Into Focus

30 minutes/2002 1/2" VHS 099.35-06V \$10.00
Level: Grades 9-Adult CLOSED CAPTIONED

The sixth program in the Destination Tomorrow Series, produced by the NASA Langley Research Center's Office of Education. This program of Destination Tomorrow communicates knowledge resulting from NASA's aeronautics and space technology programs. NASA researchers discuss new and developing technologies that will benefit current and future generations. This episode highlights new Mars exploration missions to help explain unanswered questions about the red planet; a new device developed at NASA to give parents a second set of eyes to keep children safer and a retired NASA engineer whose revolutionary design helped launch America into the space age. Excellent resource for high school and adult learners. For more information, visit their web site at <http://destination.larc.nasa.gov>

NASA Destination Tomorrow™: Bringing the Future Into Focus - Program 7

30 minutes/2002 1/2" VHS 099.35-07V \$10.00
Level: Grades 9-Adult CLOSED CAPTIONED

NASA's Destination Tomorrow™: Bringing the Future into Focus is designed for educators, parents and lifelong learners by NASA Langley's Office of Education. This educational, informative program builds on the premise that much of NASA's aeronautical research focuses on creating today's knowledge to solve tomorrow's problems. This program consists of five exciting segments. In the "Behind the Scenes" segment, viewers will learn about the new weather satellite which will greatly improve weather prediction; in the "Tech Watch" segment, viewers will learn about NASA's commercial invention of the year, the Ventricular Assist Device (VAD) which will potentially save millions of lives; meet Israel Taback, Chief Engineer for the Viking Mission in the "Retrospective" segment; see how NASA is making flying safer in the "On the Runway" segment; and find out how virtual reality works in the "How it Works" segment. For more information, visit their web site at <http://destination.larc.nasa.gov>

NASA Destination Tomorrow™: Bringing the Future Into Focus - Program 8

30 minutes/2002	½" VHS	099.35-08V	\$10.00
Level: Grades 9-Adult	CLOSED CAPTIONED		

NASA's Destination Tomorrow™: Bringing the Future into Focus is designed for educators, parents and lifelong learners by NASA Langley's Office of Education. This educational, informative program builds on the premise that much of NASA's aeronautical research focuses on creating today's knowledge to solve tomorrow's problems. This program consists of five exciting segments. In the "Behind the Scenes" segment, viewers will learn about the Materials International Space Station Experiment; in the "Tech Watch" segment, viewers will learn about a new catalytic converter developed by NASA which will help decrease pollution; viewers will learn about the important history of the Transonic Dynamics Tunnel (TDT) in the "Retrospective" segment; viewers see how NASA is making flying safer in the "On the Runway" segment; and viewers find out how lasers works in the "How it Works" segment. For more information, visit their web site at <http://destination.larc.nasa.gov>

NASA Destination Tomorrow™: Program 9: Bringing the Future Into Focus

30 minutes/2003	½" VHS	099.35-09V	\$10.00
Level: Grades 9-Adult	CLOSED CAPTIONED		

NASA's Destination Tomorrow™: Bringing the Future into Focus is designed for educators, parents and lifelong learners by NASA Langley's Office of Education. This educational, informative program builds on the premise that much of NASA's aeronautical research focuses on creating today's knowledge to solve tomorrow's problems. This program consists of five exciting segments. In the "Behind the Scenes" segment, viewers will learn about the HELIOS experimental airplane; in the "Tech Watch" segment, viewers will learn about a new breast cancer detection device developed by NASA which will help save lives; in the "Retrospective" segment; viewers will learn about Project Gemini; viewers will see how NASA is making flying quieter in the "On the Runway" segment; and viewers find out how spacesuits work in the "How it Works" segment.

NASA Destination Tomorrow™: Program 10: Bringing the Future Into Focus

30 minutes/2003	½" VHS	099.35-10V	\$10.00
Level: Grades 9-Adult	CLOSED CAPTIONED		

NASA's Destination Tomorrow™: Bringing the Future into Focus is designed for educators, parents and lifelong learners by NASA Langley's Office of Education. This educational, informative program builds on the premise that much of NASA's aeronautical research focuses on creating today's knowledge to solve tomorrow's problems. This program consists of five exciting segments. In the "Behind the Scenes" segment, viewers will learn about how NASA is studying the Northern Lights; in the "Tech Watch" segment, viewers will learn about a parachute that is attached to a plane, rather than a person; viewers will learn about World War II aircraft in the "Retrospective" segment; viewers see new satellites which may help predict weather better in the "On the Runway" segment; and viewers find out how air traffic control works in the "How it Works" segment.

NASA Science Files™**The Case of the Inhabitable Habitat**

60 minutes/2002	1/2" VHS	011.0-07V	\$16.00
Level: Grades 3-5	CLOSED CAPTIONED		

The tree house detectives accept the challenge of designing a habitat that can sustain life on Mars. In order to design an award winning habitat, the tree house detectives decide that they must first learn more about the planet Mars and the various habitats found here on Earth. For more information about this program and others in the series, please visit their web site at <http://scifiles.larc.nasa.gov>

NASA Science Files™: The Case of the Powerful Pulleys60 minutes/2002
Level: Grades 3-5 $\frac{1}{2}$ " VHS
CLOSED CAPTIONED

012.0-15V

\$16.00

In "The Case of the Powerful Pulleys", Jacob has an unfortunate accident and breaks his foot which leaves him unable to climb the ladder to the tree house. The tree house detectives are determined to have Jacob rejoin them. They use Problem-Based Learning (PBL) to investigate the world of simple machines and physical science, and they "pull" together to get everyone back into the tree house. The NASA Science Files™ series is a distance learning initiative designed to integrate and enhance the teaching of mathematics, science, and technology in grades 3-5. Each episode includes hands-on classroom and home activities, virtual field trips, subject-matter experts, and Dr. "D," the tree house detectives' next-door neighbor and mentor. The tree house detectives form an ethnically diverse cast of inquisitive school children who use Problem-Based Learning strategies and scientific inquiry to investigate a variety of issues and problems.

NASA "WHY?" Files 2001-2002 7-Part Video Series7 hours/2002
Level: Grades 3-5 $\frac{1}{2}$ " VHS
CLOSED CAPTIONED

099.33 V

\$60.00

The NASA "Why?" Files 7-part Video Series includes the following programs:

The Case of the Mysterious Red Light
The Case of the Barking Dogs
The Case of the "Wright" Invention
The Case of the Electrical Mystery
The Case of the Inhabitable Habitat
The Case of the Challenging Flight
The Case of the Phenomenal Weather

The NASA "Why?" Files is a series of instructional programs emphasizing standards-based instruction, problem-based learning and scientific inquiry. The series seeks to motivate students in grades 3-5 to become critical thinkers and active problem solvers. Each program supports the national mathematics, science and technology standards and has three components that include (1) a 60-minute television broadcast; (2) a companion educator's guide; and (3) interactive web-based activities and materials. For more information, visit their web site at <http://whyfiles.larc.nasa.gov> or <http://scifiles.larc.nasa.gov>

SCIENCE & TECHNOLOGY Subject Area Value Pack Module

Item #011

\$61.00

DESTINATION TOMORROW™ 5-Part Series Videotape
NASA "Why?" Files 4-Part Series Videotape
Optics-Making Light Work Videotape

Our Subject Area Value Pack Modules include everything you need to teach a unit. Many include videotapes, CD-ROMs, educator guides, slides, and more! Subjects such as careers, earth science, geography, history of flight, life science, mathematics, physics, science & technology, and space science are available. We also have modules specifically for Spanish materials and for the elementary grades. Items in modules are discounted and a free gift is included in each module. For complete descriptions of individual programs visit our website at <http://core.nasa.gov>

SPACE SCIENCE/ASTRONOMY

ExoQuest

Level: Grades 7-9/2001	1-pack	MAC/WIN	400.1-36A	\$79.95
Level: Grades 7-9/2001	5-pack	MAC/WIN	400.1-36B	\$299.95
Level: Grades 7-9/2001	10-pack	MAC/WIN	400.1-36C	\$499.95

Are we alone in the universe? A multimedia, educational product developed by NASA Classroom of the Future™ uses this question as a framework for integrating current research in astrobiology into the grade 7-9 curriculum. The astrobiology context allows students to explore topics in astronomy, evolution, paleontology, biology, earth science, physics, chemistry, geology and remote sensing. With the cooperation of the researchers involved, ExoQuest takes students on virtual journeys to destinations based on past, present, and future NASA missions. Each investigation poses problems that focus on different areas of research. The ExoQuest curriculum includes twelve activity modules. For more information visit their web site at <http://www.cotf.edu/ExoQuest>

Imagine the Universe!/StarChild

7 th Edition/2003	CD-ROM	400.1-30	\$5.00
Level: Grades K-8, 9-14	MAC/WINDOWS '95		

This CD-ROM captures three NASA astronomy and space science web sites as they existed in January of 2002. Imagine the Universe contains information on the exotic and energetic objects in our universe, as well as introductions to how astronomers study the x-ray and gamma ray universe. StarChild provides general astronomy and space travel information at two reading levels for K-8. Each of these sites contains its own learning adventure full of facts, fun, beautiful images, movies and great educational resources for educators. Also included is the Astronomy Picture of the Day for the year - every day a different picture of the cosmos with a description written by a professional astronomer. For more information write to itu@heasarc.gsfc.nasa.gov or visit the Imagine the Universe! web site at <http://imagine.gsfc.nasa.gov>

Macintosh System 7.1 or higher and PC Windows '95 or later platforms.

Infrared: More Than Your Eyes Can See

7 minutes/2002	1/2" VHS	010.1-17V	\$10.00
Level: Grades 5-8	CLOSED CAPTIONED		

You will learn about infrared light, the measurement of temperature; how night vision cameras see the invisible; how fire departments have the ability to see through smoke and dust; and how they are able to detect forest fires through clouds and smoke. For more information on Infrared and Infrared Astronomy, visit their web site at <http://www.ipac.caltech.edu/Outreach/Edu/>

SPACE SCIENCE – ASTRONOMY Subject Area Value Pack Module

Item #010

\$82.00

Astronomy/Hubble/Satellites Print/Poster
Chandra X-Ray Observatory CD-ROM
Planets Slide Program
Small Bodies, Big Impact Videotape
Solar System Braille Map
Solar System Exploration Videotape
Solar System Lithograph Set
Space-Based Astronomy Publication
Stars & Galaxies Slide Program
Ten Years of Discovery: Hubble Telescope Slide Program
Universe Videotape

Our Subject Area Value Pack Modules include everything you need to teach a unit. Many include videotapes, CD-ROMs, educator guides, slides, and more! Subjects such as careers, earth science, geography, history of flight, life science, mathematics, physics, science & technology, and space science are available. We also have modules specifically for Spanish materials and for the elementary grades. Items in modules are discounted and a free gift is included in each module. For complete descriptions of individual programs visit our website at <http://core.nasa.gov>

SPACE SCIENCE/General

Astronomy Village: Investigating the Universe™

Level: Grades 9-12/2002	1-pack	MAC/WIN	400.1-43A	\$79.95
Level: Grades 9-12/2002	5-pack	MAC/WIN	400.1-43B	\$299.95
Level: Grades 9-12/2002	10-pack	MAC/WIN	400.1-43C	\$499.95

Astronomy Village: Investigating the Universe™ is a CD-ROM based multimedia program that provides teachers and students with ten complete investigations in astronomy intended to complement and extend the science curriculum in 9th and 10th grade classes. Students, in teams of three, use the Astronomy Village software to conduct investigations in astronomy and learn about the nature of scientific inquiry. The Astronomy Village's interface is based on the village-like appearance of major observatories on mountaintops. Tools available to students include an image processing program, an image browser, and various simulation programs. The simulation programs include a star life cycle simulator, an orbital simulator (Mac only), and a 3-D star simulator (Mac only). Other resources available on this CD for the student research teams include: digitized video clips; images from the Hubble Space Telescope and other instruments; audio clips of astronomers discussing their work; computer animations and graphics; and full text documents such as book chapters, NASA publications, and articles from astronomy journals and magazines.

Hubble Reborn

11 minutes/2002	½" VHS	002.4-11V	\$10.00
Level: Grades	CLOSED CAPTIONED		

Tells the story of the latest servicing mission to the Hubble Space Telescope in March 2002, culminating in the release of the new images from the Advanced Camera for Surveys (ACS). Produced by the Space Telescope Science Institute. For more information, visit their web site at <http://www.stsci.edu>

NASA CONNECT™

Data Analysis and Measurement: Dancing in the Night Sky

30 minutes/2003	½" VHS	002.4-12V	\$10.00
Level: Grades 6-8	CLOSED CAPTIONED		

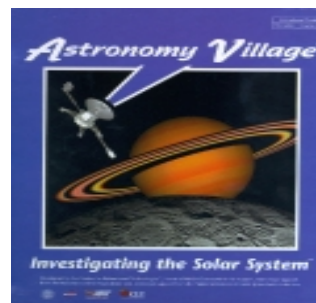
NASA CONNECT™ Series is produced by the NASA Langley Research Center's Office of Education. In this program, NASA engineers and researchers use data analysis and measurement to study the auroras, key regions of the Earth's geospace or space environment.

NASA Science Files™

The Case of the Galactic Vacation

60 minutes/2003	½" VHS	002.4-13V	\$16.00
Level: Grades 3-5	CLOSED CAPTIONED		

NASA Science Files™ Series is produced by the NASA Langley Research Center's Office of Education. In this program, the tree house detectives go galactic with their latest project. Learn how long it will take to travel to Mars and how the Moon affects the Earth. Come visit Arecibo, the home of the largest radio telescope in the world and help look for intelligent life in the universe. Join the tree house detectives for an "out-of-this-world" vacation as they explore the future of space travel.



SPACE SCIENCE/PLANETARY/MARS

SPACE SCIENCE – MARS Subject Area Value Pack Module

Item #010.2

\$25.00

Mars, What Would You Wear?
 Mars VE: Virtual Exploration Mission CD-ROM
 NASA CONNECT™ Eyes Over Mars Videotape
 Mars Pathfinder/Sojourner Return to the Red Planet

Our Subject Area Value Pack Modules include everything you need to teach a unit. Many include videotapes, CD-ROMs, educator guides, slides, and more! Subjects such as careers, earth science, geography, history of flight, life science, mathematics, physics, science & technology, and space science are available. We also have modules specifically for Spanish materials and for the elementary grades. Items in modules are discounted and a free gift is included in each module. For complete descriptions of individual programs visit our website at <http://core.nasa.gov>

SPACE SCIENCE/PLANETARY/MOON

SPACE SCIENCE – MOON Subject Area Value Pack Module

Item #010.3

\$45.00

CRATERS! Book w/CD-ROM
 Moon: The Geologic History/Future Exploration Slide Program
 Reading the Moon's Secrets Videotape
 Remembering Apollo 11 CD-ROM

Our Subject Area Value Pack Modules include everything you need to teach a unit. Many include videotapes, CD-ROMs, educator guides, slides, and more! Subjects such as careers, earth science, geography, history of flight, life science, mathematics, physics, science & technology, and space science are available. We also have modules specifically for Spanish materials and for the elementary grades. Items in modules are discounted and a free gift is included in each module. For complete descriptions of individual programs visit our website at <http://core.nasa.gov>

SPACE SCIENCE/PLANETARY/SUN

SPACE SCIENCE – SUN

Item #010.2.8

\$33.00

Colors of the Sun Videotape
 The Dynamic Sun CD-ROM
 SOHO Portfolio of Images Lithograph Set
 Sun-Earth Days Print/Poster Packet
 Ulysses: A Voyage To The Sun Videotape

Our Subject Area Value Pack Modules include everything you need to teach a unit. Many include videotapes, CD-ROMs, educator guides, slides, and more! Subjects such as careers, earth science, geography, history of flight, life science, mathematics, physics, science & technology, and space science are available. We also have modules specifically for Spanish materials and for the elementary grades. Items in modules are discounted and a free gift is included in each module. For complete descriptions of individual programs visit our website at <http://core.nasa.gov>

Sun-Earth Day Kit

Level: Grades K–12

Packet

002.2-22P

\$6.00

There are 7-10 educational products in the packet meant to support and provide additional knowledge for those participating in Sun-Earth Days. For additional information, visit their web site at: http://sunearth.gsfc.nasa.gov/SECEF_SunEarthDay

ACTIVITY KITS/SPACE MEMORABILIA

Bendos Action Figure

Luna – Space Adventurer

300.0-42J

\$4.00

They're bendable, posable and palm-sized portable. One hot collectible and one cool toy. Not for children under 3 yrs.

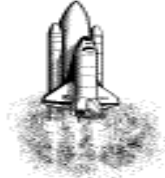
Bendos Action Sets

Spacecruiser

300.0-42I

\$12.00

They're bendable, posable and palm-sized portable. This set includes spacecruiser and Zoomer action figure. Fueled entirely by muscles and turbo-charged master minds. One hot collectible and one cool toy. Not for children under 3 yrs.



"BLAST BACK TO SCHOOL" Set

300.0-48

\$10.00

Additional kits available for \$6.00 each!

Everything you need to start school! Notebook with the cool NASA emblem, pen and pencil with the NASA emblem, spacey eraser and ruler, out of this world folder and other great items from NASA. Be the first in your class to have the complete NASA "Blast Back to School" Set. We'll include links to NASA's educational materials and great places to find information for your homework assignments.

Commander Wolf Perry Action Figure: Space Voyagers AstroSquad

toy

300.0-46B

\$9.95

Commander Perry wears a "J" series spacesuit, the type worn during the Apollo 15, 16 and 17 missions. He comes with historically accurate equipment, Lunar EVA helmet, portable life-support system backpack, camera and Ultraviolet Observatory Camera. Accurate details, 15 points of articulation, posable. Space Voyagers, the most authentic space toys on Earth, feature the specialty alternative to mass market action figures with heroic astronaut figure role models with realistic and detailed accessories. Educational information about the space program is included with every toy. Each Space Voyagers figure represents a unique opportunity to get children excited about space and science! Not for children under 3 years of age. Lunar Roving Vehicle is also available for use with the Commander Perry Action Figure, CORE item #: 300.0-46A for \$12.95

Inflatable Globe

12" Plastic

300.0-38C

\$2.50

Inflatable Stellar Globe

12" Plastic

300.0-38B

\$2.50

These unique 12" inflatable globes are fun to play with and a great way for kids to learn about the world we live in. Introduce children to geography with the attractive and very durable inflatable globe or the unique stellar globe shows a full panorama of the entire night sky. This is a great and inexpensive way to see the star map of the night sky.

Insulated Auto Mug w/NASA Logo

14 oz.

300.0-44

\$4.00

14 oz. thin wall insulated auto mug, plastic liner, white w/blue lid, color coordinating handle and blue lining. 6 ¾" tall and has a thumb slide lid. NASA logo is printed on two sides. Fits most car and truck cup holders. Great for keeping your coffee or tea warm and even works with cold drinks. White plastic mug w/blue lid and blue handle and NASA logo in red and blue.



Lunar Roving Vehicle: Space Voyagers AstroSquad

toy

300.0-46A

\$12.95

Lunar Roving Vehicle from the Apollo 15, 16 and 17 missions. Deployed on the Moon for the first time in 1971, it was folded and stored on the outside of the lunar module during spaceflight. The rover could carry two astronauts, tools, scientific equipment, communications gear and lunar samples. Space Voyagers, the most authentic space toys on Earth, feature the specialty alternative to mass market action figures with heroic astronaut figure role models with realistic and detailed accessories. Educational information about the space program is included with every toy. Each Space Voyagers figure represents a unique opportunity to get children excited about space and science! Not for children under 3 years of age. Action Figure Wolf Perry is also available for use with the Lunar Roving Vehicle, CORE item #: 300.0-46B for \$9.95

Ruler w/NASA Vector Logo

12"

300.0-15

\$1.00

Painted white ruler with space characters and aircraft drawings. Excellent for classroom projects and incentives. Not for children under 3 yrs.

Round Playing Cards

NASA Vector

300.0-35B

\$3.00

Moon

300.0-35C

\$3.00

Mars

300.0-35D

\$3.00

Full 52-card deck, includes jokers, round 3" cards.

Space Cookie Cutter Set 3 pc set

300.0-45

\$6.00

Collection includes three cookie cutters: Space Shuttle, rocket ship and airplane. All cookie cutters are made of tin and are approximately 4" in size. The cutters are the outline of the vehicle and can be used with cookie dough, bread or tortillas. The Space Shuttle cookie cutter is also sold with our 3,2,1, Liftoff Educator Guide 300.1-09P for \$6.00.

**Space Shuttle Model Kit "Fly the Dream"**

Paper Model Kit

300.0-47

\$8.00



Designed for all space exploration dreamers. This paper model kit includes everything kids need to fold, tuck and make their very own space shuttle orbiter. Easy to follow instructions with pre-marked, scored pieces and 2-way tape already in place. The accurate and realistic graphics and large size (17" x 25") add to the "WOW" of this model. Assembly required and some adult supervision may be needed. Instructions for assembly available in English, French and Spanish.

Space Voyagers Adventure Fleet

X-Planes: Extreme Machines

300.0-39

\$7.00

This authentic collection of Adventure Fleet™ vehicles brings to life the extreme X-Planes that blazed the skies, leading the way for space exploration. Includes X-15, x-20 Dyna-Soar, X-24A Lifting Body, Shuttle Enterprise and X-38. Not for children under 3 yrs.

Space Voyagers Adventure Fleet

America's Race to Space

300.0-40

\$7.00

This authentic collection of Adventure Fleet™ vehicles celebrates America's race into space and its continued exploration. Includes Mercury Redstone, Mercury Atlas, Gemini Titan, Apollo Saturn 5 and Space Shuttle. Not for children under 3 yrs.

Publications



3, 2, 1..Liftoff: An Educator's Guide With Activities in Science, Mathematics, Technology & Language Arts

guide packaged with space shuttle cookie cutter for completion of one activity and two slides on rockets.

Level: Grades Pre-K-2

EG-2002-02-001-JSC

300.1-09P

\$6.00

The construction of the International Space Station (ISS) is one of humankind's most exciting and challenging endeavors. Numerous rocket launches are required to build this orbiting science laboratory. The purpose of this curriculum supplement is to introduce students in the Early Childhood classroom to the International Space Station and the role rockets play in its construction. The guide uses these topics as the basis for interdisciplinary activities for the early learner. The product begins with background information for educators. The activities in this guide are for use individually or as part of a more concentrated space or transportation unit. Educators may choose the sequence of lessons to best fit the requirements of their classrooms. The activities require a minimum of preparation time and use materials that are usually available in the Early Childhood classroom. These activities emphasize hands-on involvement, data collection, observation, exploration, prediction, interpretation, problem solving, and development of language skills. Each activity features objectives, a material list, educator information, procedures, and suggestions for assessment and enrichment. When appropriate, the guide provides illustrations and graphics for activities. Each activity correlates to national science, mathematics, technology, and English language arts standards. Because many lessons are interdisciplinary, matrix charts relating activities to national standards are included.

Amateur Radio In Space: A Teacher's Guide With Activities in Science, Mathematics and Technology

Level: Grades K-4/1998

EG-1998-03-114-HQ

300.1-11P

6.00

This educator's guide contains background information on the Space Amateur Radio EXperiment (SAREX) designed to facilitate communication between astronauts in orbit and students on the ground. Hands-on activities in this guide explore concepts related to amateur radio in the areas of science, mathematics and technology.

Amazing Space: Education On-Line from the Hubble Space Telescope

Level: Grades 5-8/1997

EG-1997-01-002-GSFC

300.1-12P

6.00

Do you want to take your class on a field trip to the edge of the observable universe? If so, join Professor Wifpic and the cadets of the Hubble Academy as they count, classify and analyze objects from the Hubble Deep Field, almost 12 billion light-years away. In this lesson, students will examine the Hubble Deep Field image and simulate the process astronomers use to count, classify and identify the objects in the image. These objects include spatial, elliptical and irregular galaxies, as well as a few individual stars. Contains lithos, educator guide and activities.

Atlas of the Ocean: The Deep Frontier Teacher's Guide

(to accompany National Geographic Atlas of the Ocean Hardcover Book)

ISBN 068401512-9/2002

Book

300.1-28P

\$6.00

Level: Grades 5-12

This 30-page guide features classroom activities that feature content taken from National Geographic's "Atlas of the Ocean: The Deep Frontier". Each activity in the guide takes the student on an underwater adventure exploring our oceans. Subjects include undersea hot spots, underwater archaeology, bioluminescence, coral reefs, and polar sea exploration. This colorful book of maps, charts and deep sea images also features black line maps that will allow your students to plot their own findings and notes of discovery. Recommended for middle-high school geography education.

Atmospheric Detectives: ATLAS 2 Teacher's Guide with Activities

Level: Grades 5-8

EP285/11-92

300.1-29P

\$6.00

Can you imagine doing a science project in space? This is the challenging and exciting situation that researchers experience in Spacelab, the laboratory carried inside the Shuttle. Here, hundreds of kilometers above Earth's surface, the crews of the ATLAS missions scan, probe and measure concentrations of chemicals and water vapor in Earth's protective bubble. Because the health of the atmosphere is of vital importance to all Earth's inhabitants, everyone should be part of this investigation. You can be active participants in exciting and vital activities; recycling and practicing other conservation methods and gathering information to learn more about how you can keep our atmosphere healthy now, as students and in the future as informed citizens, scientists, technicians and mathematicians.

Auroras! Mysterious Lights in the Sky

Level: Grades K-4/2002

ET-2002-9-004-GSFC

300.1-38P

\$6.00

Wonderful color book that tells the story of Auroras! The mysterious lights in the sky. Would you like to go to the far, far North and the far, far South to a dark, starry night outside of your house? And to a place where scientists work, and up into space above the Earth? Just say YES and off we'll go. Great book for elementary students. Includes science facts for teachers and parents. Set includes 5 books for classroom use.

Capturing a Whisper From Space

Level: Grades 6-8/2003

EW-2003-02-014-JPL

300.1-40P

\$6.00

A folded poster of the worldwide system of sensitive antennas that communicate with NASA's interplanetary spacecraft. The Deep Space Network is made up of complexes of antennas in three locations on the globe: Goldstone, California; Canberra, Australia; and Madrid, Spain. Includes careers in space and curriculum activities on the reverse side of the poster.

Celebrating a Century of Flight

Level: Grades 5-12/2002

SP-2002-09-511-HQ

300.1-26P

6.00

Recounts the milestones of flight in the past century. Includes significant events from earlier periods. Beginning with 3500 B.C. with the King Etena of Babylonia, flying on an eagle's back through the year 2000 and the first crew of the International Space Station. Book also includes activities and on-line resources for the subject area.

Centennial of Flight VIP Packet

Level: Grades 5-12/2003

Pub/Poster Pkg 300.1-17P

\$6.00

The Centennial of Flight VIP packets will include the following materials: Introductory Letter; An Educator's Electronic Toolkit; 4 Bookmarks: Centennial of Flight Bookmark, NASA Education Bookmark, Designing the 21st Century Aerospace Vehicle Bookmark, Earth to Orbit Bookmark; Folded posters: The 1902 Glider: How the Problem of Control was Solved Educational Wallsheet EW-2002-08-136-HQ8-panel wallsheet that explains the history of the first flight; Centennial of Flight Timeline Poster NW-2002-08-157-HQ; 32-Page Airline Brochure, describes the story and influence of flight. PLEASE NOTE: Items in this packet may vary, most are available on-line at <http://spacelink.nasa.gov/products>

City Night Lights Poster

Level: Grades 9-Adult/2002

300.1-18P

6.00

The student will be able to interpret Earth System Science satellite imagery and explain the relationship between urban development, geography and the global eco system. The student will be able to apply knowledge of satellite urban imagery to additional interdisciplinary learning activities within science, math, geography, social studies and technology. A world atlas map is recommended to be used with this learning tool. This wonderful poster of the world shows population and energy usage. Includes information on the back of the poster from our Mission Geography program. Excellent for framing.

Changing Climate: Global Systems Science Student Guide

Level: Grades 9-12/2000

Student Guide/Book

300.1-30P

\$6.00

Changing Climate addresses the controversial question of how human activities may be changing Earth's climate. It takes students on a "field trip" to Mauna Loa Observatory where they see how scientists have measured carbon dioxide in the Earth's atmosphere since 1957. They graph and interpret data from Mauna Loa and other observatories which led to the prediction, in 1988, that changes in our atmosphere will cause the entire globe to gradually warm up. They also measure carbon dioxide in the laboratory to find out how much is contained in a sample of human breath and car exhaust. The Guide goes on to show how the discoveries at Mauna Loa have been challenged by other scientists in the early 1990's, and discusses the consensus of opinion about global climate change that finally emerged in 1995. The guide identifies scientific questions which still remain unanswered, and involves students in thinking about the economic, political, and ethical implications of regulating human activities to reduce the likelihood of global climate change.

Discover Earth: Ozone Classroom Materials for Precollege Teachers

Level: Grades 5-12/2002

1-ALPHA-422

300.1-19P

6.00

Discover Earth is a NASA-sponsored project for teachers of grades 5-12, designed to: enhance understanding of the Earth as an integrated system, enhance the interdisciplinary approach to science instruction, and provide classroom materials that focus on those goals. The Discover Earth classroom materials focus on the Earth system and key issues of global climate change including topics such as the greenhouse effect, clouds and Earth's radiation balance, surface hydrology and land cover, and volcanoes and climate change.

EOSDIS From Photons to Tools for Farming, Water Resources Poster

Level: Grades 5-12/1998

EW-1998-10-011-GSFC

300.1-20P

6.00

The Earth Observing System Data and Information System is an integral part of NASA's Earth Observing System (EOS). EOS, in turn, is a major component of NASA's Earth Science Enterprise. EOSDIS is the robust distributed system that processes, archives, and manages Earth Science satellite and field data, and distributes this data to a diverse global user community. Over 700 atmospheric, oceanographic and land process studies, as well as global biosphere disciplines. Most of these data products are well suited for long-term global climate studies, and many are suitable for regional small-scale applications. All data products are fully supported with documentation and technical user support. Poster shows an Earth image, synthesized from four remotely sensed data layers: visible light reflection over land, fires over land, aerosols over the oceans, and infrared cloud images from four geostationary satellites.

Earth and Mars: As Different As They Are Alike

Folded Poster/2002

NW-1999-01-001-GSFC

300.1-37P

\$6.00

Interest in Mars, the fourth planet from the Sun, began long before people were able to send spacecraft to the Red Planet. Even early astronomers were able to see Mars' brightness and position changes in the sky. With the invention of powerful telescopes, scientists were able to see the surface of Mars for the first time. Today, we send robotic missions to Mars to study its surface. These missions have shown us that Mars' solid surface is much like that of Earth. Mars missions will launch about every two years, to gain a better understanding of Mars' geologic history and search for evidence of past or present life. Attention Teachers: This wallsheet presents summaries of classroom-appropriate activities to help students grasp basic concepts about Earth and Mars and their place in the Solar System. The full lesson plans with student pages are available online at <http://mars.jpl.nasa.gov/classroom/teachers.html>. Mars images can be found at <http://photojournal.jpl.nasa.gov> and <http://mars.jpl.nasa.gov/gallery/index.html>. Most of the Mars images on this poster were taken by the Mars Orbiter Camera (MOC) on the Mars Global Surveyor (MGS) spacecraft, and can be found at <http://www.msos.com>.

Earth As A System

Poster/2000

EB-2000-01-129-HQ

300.1-35P

\$6.00

This classroom component is a result of the Discover Earth workshop and translates the educators' research experience and workshop science content into materials that can be broadly shared and used with colleagues worldwide. The authors encourage the use of the Discover Earth materials by providing substantial background information, linking the classroom activities directly with daily life and ensuring that the activities respond to national science standards.

Earth Observing System

Folded Poster/1999

NW-1999-01-001-GSFC 300.1-34P

\$6.00

This poster highlights images of the Earth, including the Pacific ocean using sea surface height measurements derived from the U.S. French TOPEX/POSEIDON satellite. There is also a "false color" view of the Earth, produced using visible and infrared data from the NOAA GOES-8 Satellite. White areas indicate cloud patterns; bodies of water in blue; and land masses are green to tan indicating varying amounts of vegetation. Additionally, on the back of the poster flights are listed by year with their objectives and applications from 1997 through 2003.

Electromagnetic Spectrum

Folded Poster/2002

NW-2002-5-032-GSFC 300.1-41P

6.00

The light that we see with our eyes or visible light represents only a small portion of the electromagnetic spectrum. Developing the technology to detect and use other portions of the electromagnetic spectrum, the "invisible" light that our eyes cannot see has had a tremendous impact on our daily lives. When you listen to a radio, heat your food in a microwave oven, use a remote control, or have an X-ray taken, you are using "invisible" light. In astronomy, scientists use the properties of light to learn about celestial objects that are too far away to visit. Each portion of the electromagnetic spectrum provides unique clues about the nature of our universe. The mission and research programs in NASA's Astronomical Search for Origins program use innovative technologies to observe the universe at a variety of wavelengths (ultraviolet, visible and infrared) in search of the answer to two enduring human questions: Where did we come from? Are we alone?

Exploring Earth From Space Litho Set

Level: Grades 5-12/2002

LS-2002-12-003-HQ

300.1-36P

\$6.00

Shuttle astronauts and the ISS EarthKAM program provide photos of our planet from the unique perspective of Earth orbit. This resource can enhance students' studies of Earth and space science, geography, social studies, mathematics, and educational technologies. The set contains an educators' guide, student information and worksheets, and several Earth photos taken from the Space Shuttle. Includes 14 lithos: ISS EarthKAM Photography; Earth Features Seen from Space; Analusia, Spain; Buenos Aires, Argentina; Cloud Patterns; Colorado River; Creative Agriculture in Response to Limited Water; Ganges River Delta; Gazankulu Homeland, South Africa; Nile River Delta; Northeast Coast of Australia; Rio Salado, Argentina; San Jose, California; and the Tibetan Plateau.

From the Top of the World to the Bottom of the Food Web Poster

Level: Grades K-12/2002

EW-2002-3-3006-GSFC 300.1-25P

6.00

NASA's ocean color satellite instruments are more sensitive than the human eye, surveying our global oceans in a few hours. But what are they sensing: Plants? Animals? Something else? Why does ocean color vary in time and place? Can we detect whether microscopic marine organisms are potentially harmful? Discover more about the connections between marine ecology, light's behavior in ocean water and satellite observations. The back of the poster includes activities and web site referrals for more information. Folded Poster.

Greenhouse Effect/Earth's Energy Balance Brochure

Level: Grades 9-12/1997

NP-1997-01-003-GSFC 300.1-31P

\$6.00

The "greenhouse effect" is the warming of climate that results when the atmosphere traps heat radiating from Earth's surface. Certain gases in the atmosphere resemble glass in a greenhouse, allowing sunlight to pass in to the "greenhouse", but blocking Earth's heat from escaping into space. Earth's energy balance is also discussed in this tri-fold brochure. Packaged to include 10 brochures.

Hurricane Andrew Poster

Level: Grades 9-12/1997

NW-1997-10-006-GSFC 300.1-22P

6.00

Wonderful four-color poster of Hurricane Andrew. Hurricanes are large weather systems with strong winds rotating around a calm center, the eye. Most hurricanes that affect the continental United States form in tropical waters near the equator. A hurricane starts as a tropical storm that gains heat energy and moisture as it drifts northward over the warm waters, such as those of the Caribbean Sea or the Gulf Stream. When its sustained winds reach 74 mph, the storm is classified as a hurricane. A hurricane is fed by warm ocean waters, so once it starts to cross land, deprived of heat and energy and dragged apart by friction, the storm dissipates, but often not until it has caused massive destruction to people and property. You and your students can learn interesting facts from the information on the back of the poster: Highs and Lows of Forecasting, The Scale of a Storm, Storm Surge and Power of a Hurricane.

Learning to Fly: The Wright Brothers' Adventure

Level: Grades 6-9/2003

EG-2003-02-007-GRC 300.1-39P

\$6.00

This NASA educator guide has excellent background information about Wilbur and Orville Wright. The guide contains student activity pages and templates for building the 1900, 1901, and 1902 Gliders and the 1903 Flyer.

Life on Earth...and elsewhere?

Level: Grades 5-10/2000

300.1-24P

\$6.00

Astrobiology is an interdisciplinary field. It provides a relevant, meaningful context for students to explore key concepts in biology, chemistry, physics, mathematics and Earth and space science. This educator resource guide provides opportunities for students in grades 5-10 to master fundamental science concepts and develop inquiry skills. The hands-on activities introduce students to core ideas in astrobiology by examining five key questions: What is life? What does life require? Which planets and moons might be habitable? How do Earth's extremophiles support the idea of extraterrestrial life? What are the possibilities for life elsewhere in our solar system?

Looking at Earth From Space: Glossary of Terms

Level: Grades 5-12/1994

EP-302 8/94

300.1-33P

\$6.00

Materials have been developed to familiarize educators with global change issues and to enhance classroom studies using satellite images. In this book, you will find a glossary of concepts and terms relevant to Earth science, remote sensing and direct readout.

Microgravity: A Teacher's Guide With Activities in Science, Mathematics and Technology

Level: Grades 5-12/1997

EG-1997-08-110-HQ

300.1-13P

\$6.00

This educator guide contains excellent background information accompanied by classroom activities that enable students to experiment with the forces and processes microgravity scientists are investigating today.

New World View: Global Systems Science Student Guide, A

Level: Grades 9-12/1999

EP-1999-01-390-HQ

300.1-21P

\$6.00

Global change. Sustainability. Integrated science. How humans impact our global environment. These are core ideas of Global Systems Science—an integrated science course for high school students. A New World View is the introductory volume in this series. Global systems science is a new field of study about the interactions between Earth's natural systems and human activities. The people who study global systems science draw on methods and theories of many different fields—from chemistry and biology to economics and politics—in order to predict how today's actions are likely to affect the world of tomorrow—our world and our children's world.

Our Very Own Star: The Sun Packaged Set

Level: Grades K-4/2002

EP-2002-01-014-GSFC

300.1-14P

\$6.00

EP-2002-01-015-GSFC

This easy-to-read book is designed for students in grades K-4. Read about solar flares and sunspots and why scientists study the sun. Also includes: Nuestra Propia Estrella el Sol - This is the Spanish version of the easy-to-read book Our Very Own Star: the Sun. Designed for students in grades K-4, it has information about solar flares and sunspots and why scientists study the sun. Can also be used in a basic Spanish class.

Ozone/Nimbus-7 Total Ozone Mapping Spectrometer Poster

Level: Grades 9-12

1-ALPHA-377.1

300.1-23P

\$6.00

The images on the poster show measured total ozone levels over the Earth for each month from November 1978 to April 1993. The measurements were taken by NASA's Total Ozone Mapping Spectrometer (TOMS) aboard the Nimbus-7 satellite. The color scale at the bottom shows the amount (sum of all the ozone in a vertical column through the atmosphere) in Dobson units. Normal to high ozone levels are indicated by the colors green, yellow and red, respectively. Blue and purple indicate low to very low ozone concentrations. The individual images have been rotated each month in order to show the polar region in the Spring of each hemisphere. This is the season when the most dramatic ozone depletion occurs. Includes 9-panels of information on the back of the poster with information and classroom activities.

Space-Based Astronomy:**An Educator Guide with Activities for Science, Mathematics and Technology Education**

Level: Grades 5-8/2001

EG-2001-01-122-HQ

300.1-15P

\$6.00

This NASA educator guide tells the story of why it is important to observe celestial objects from outer space and how to study the entire electromagnetic spectrum. This curriculum guide uses hands-on activities to help students and teachers understand the significance of space-based astronomy-astronomical observations made from outer space. It is not intended to serve as a curriculum. Instead, teachers should select activities from this guide that support and extend existing study. The guide contains few of the traditional activities found in many astronomy guides such as constellation studies, lunar phases and planetary orbits. It tells, rather, the story of why it is important to observe celestial objects from outer space and how to study the entire electromagnetic spectrum. Teachers are encouraged to adapt these activities for the particular needs of their students. When selected activities from this guide are used in conjunction with traditional astronomy curricula, students benefit from a more complete experience.

Storms from the Sun

Level: Grades 5-12/2002

EW-1998-03-003-GSFC

300.1-27P

\$6.00

This folded poster of Storms from the Sun: Coronal Mass Ejections Light Up the Sky. Millions of amps surge through our atmosphere and make bright Northern lights. On the back of the 4-color poster are eight panels with material on the following topics: Bubble, Bubble, Toil and Trouble; Storm Front; Blackouts, Burnouts, and Bummers; Measure the Motion of a Coronal Mass Ejection; Hurricane Sol; Seeing the Invisible; Make Your Own Sun-Earth Connections and NASA Resources for Educators. The poster is also available on-line at <http://spacelink.nasa.gov/products>

Teachers and Students Investigating Plants in Space: A Teacher's Guide with Activities for Life Sciences

Level: Grades 5-12/1997

EG-1997-02-113-HQ

300.1-16P

\$6.00

Students will grow AstroPlants through a life cycle, and in the process will become well acquainted with germination, orientation, growth, flowering, pollination, fertilization, embryogenesis and seed development. The lessons in this guide can be used to engage students in the fascination of space biology through plant investigations long after the Space Shuttle mission has entered the history books. It is NASA's goal that the information in these activities will motivate both teachers and students to become active and involved participants in Space Life Sciences, now and in the future.

TOPEX/POSEIDON: Revealing Our Ocean Planet

Level: Grades 9-12/1997

JPL 400-653 7/97

300.1-32P

\$6.00

Viewed from space, the oceans give Earth its "blue marble" appearance, setting our planet apart from all others in the solar system. This cloak of life-giving water that covers more than 70 percent of Earth's surface area controls our planet's climate. Studying the oceans, scientists are using TOPEX/POSEIDON satellite data to learn how heat from the Sun is transported around the globe by ocean circulation patterns. Researchers now have an improved understanding of the role of the oceans in controlling seasonal variations and longer term climate changes. TOPEX/POSEIDON data are also used for operational purposes, such as monitoring eddies and their impact on human activities and marine life. This 4-color booklet highlights: climate; seasons; wind, waves and weather; eddies; el nino; kelvin and rossby waves; the oceans from space and the satellite.

DVD**Apollo 11 Volume 3: The NASA Mission Reports**

Level: Grades 9-12/Adult/2001

Book w/DVD

400.2-22

\$24.95

On July 24th 1969 the crew of the historic first manned mission to the moon and their spacecraft Columbia arrived on the deck of the U.S.S. Hornet. The flight of Apollo 11 had been an unqualified triumph. The goals laid out by President John F. Kennedy had been attained. Neil Armstrong and Buzz Aldrin had walked on the dusty plains of the Sea of Tranquility and had returned safely to the Earth with a treasure trove of unparalleled scientific information. Now it was the turn of the world's scientific community to try and place all of this new knowledge into perspective. Hundreds of people around the world jostled for access to scraps of the lunar rocks and dust. As always NASA's own managers, engineers and scientists were the first to pore over the details in an effort to maximize the return from future missions. Just prior to the launch of Apollo 12, NASA issued the Apollo 11 Mission Report. The document contained everything from the crew's observations about the reflection off their faceplates to the interaction between the Lunar Module's footpads and the dusty lunar surface. In Apollo 11 - The NASA Mission Reports Volume 3 the first comprehensive study of man's first mission to another world is revealed in all of its startling complexity.

SCIENCE AND TECHNOLOGY**NASA DESTINATION TOMORROW SERIES****Bringing the Future Into Focus**

150 minutes/2001

DVD

099.35 D

\$12.00

Level: Grades 9-Adult

CLOSED CAPTIONED

Includes programs 1-5 on the DVD. Program 1: Aviation Safety, Program 2: Icing Research Tunnel, Program 3: Hyperactive Attention Deficit Disorder, Program 4: NASA's Hyper-X Program, Program 5: Future of flight.

EARTH SCIENCE**Planet Earth: Australia**

80 minutes/2002

DVD

002.2-29D

\$21.00

View over 240 images in high, medium and low resolutions, featuring spectacular video of Australia, the Great Barrier Reef and New Zealand taken from the Space Shuttle and the International Space Station. Australia includes more than 80 minutes of breathtaking imagery, complemented by Aboriginal music composed and performed by David Hudson. This DVD includes Widescreen Anamorphic Video, enhanced for 16:9 displays, progressive Scan Video (480P), two different playback aspect ratios are supported (16:9 1.78:1, 4:3 letterbox), video and audio digitally mastered, dolby digital 5.1, DTS 6 Channel Surround and Dolby Digital Stereo Music.

English subtitles, detailed information screens for each space image and no region coding. DVD-Video Player or Windows Personal Computer with a 400 MHz Intel Pentium II, or AMD Athlon CPU. Microsoft Windows 95, 98, NT, ME, 2000 Operating Systems. 64MB or System RAM, Graphics capability with 256 colors or more (65 K colors recommended), sound card, DVD-ROM drive (2x or faster recommended), DVD playback card or graphics card with software DVD playback capability, and Internet Explorer 4.02 or later.

Planet Earth: Oceania

80 minutes/2002

DVD

002.2-30D

\$21.00

Features spectacular video of the Earth's oceans, seas, islands and coastlines taken from the Space Shuttle and the MIR space station. Oceania includes more than 80 minutes of breathtaking imagery, complemented by the Celtic Harp music of Lisa Lynne, with world flutes by George Torttorelli. Includes over 150 images in high, medium and low resolutions.

Widescreen Anamorphic Video, enhanced for 16:9 displays, three different playback aspect ratios are supported (16:9 1.78:1, 4:3 letterbox, 4:3 Pan-Scan 1.33:1), video and audio digitally mastered, dolby digital 5.1, DTS 6 Channel Surround Sound Music. English subtitles, detailed information screens for each Space Shuttle image and no region coding. DVD-Video Player or Windows Personal Computer with a 400 MHz Intel Pentium II, or AMD Athlon CPU. Microsoft Windows 95, 98, NT, ME, 2000 Operating Systems. 64MB of System RAM, Graphics capability with 256 colors or more (65K colors recommended), sound card, DVD-ROM drive (2x or faster recommended), DVD playback card or graphics card with software DVD playback capability and Internet Explorer 4.02 or later.

CD-ROM**At Work in the Ocean**

2002

CD-ROM

400.1-45

\$5.00

Level: Grades 5-8

This CD contains material created during a series of live interactive Internet events and from education and outreach material developed during the 1999 and 2000 field seasons of the National Geographic Society's Sustainable Seas Expeditions. The three curriculum units on this CD feature clips, Web chat Q&A, labs, activities, and related resource materials. The units have also been mapped to National Science Education Standards, California, Texas, and Florida science standards. The units are: Monitoring a Habitat - Introduces your students to the importance and complexities of regular monitoring of our underwater world. Tools for Exploring the Ocean — An overview of the different ways that we monitor and explore the ocean. Oceanography Careers — Provides a fun and informative overview of the vast array of work that is done on and in the ocean.

Windows: Intel Pentium processor or compatible (300MHz minimum, 500+MHz preferred) Windows-compatible sound card (3D accelerator preferred), Windows 95, Windows 98, Windows NT 4, or later (operational under Windows 2000 and Windows ME with software rendering mode), Adobe Acrobat Reader, QuickTime (4.0 or later version), 24 MB RAM required, 130 MB hard disk space required (full VISS installation). Macintosh: PowerPC (G3 processor preferred) OS 8.5.1 or later (OS 9 preferred), Adobe Acrobat Reader, QuickTime (4.0 or later version; please allocate 10 MB of memory for better performance, ATI Rage 128 video card preferred (3D accelerator recommended but not required), 64 MB RAM required.

The Asian Monsoon and Data Assimilation

EC-2002-03-006-GSFC/2002

CD-ROM

400.1-47

\$5.00

Level: Grades 9-12

This interactive, student-centered CD-ROM for studying global climate patterns focuses on the Asian monsoon season. Students are guided through an investigative journey studying weather and climate patterns and their effects on the local and world environments. The CD-ROM contains complete teacher, student and resource guides (.pdf) for high school audiences and a Data Visualizer with 4,000 data graphs. A presentation of how the Asian monsoon is studied through Data Assimilation contains 7 QuickTime movies of data and scenes from Asia. Recommended for: High school. For more information, visit their web site at http://dao.gsfc.nasa.gov/sci_highlights/monsoon_cd

Macintosh: Power Macintosh 7100 or greater, 12Mb RAM, 2x CD-ROM and QuickTime 4.0 (included on the CD). Standard PC: Pentium preferred with at least 16Mb of RAM, CD-ROM, QuickTime 4.0 (included on CD) for Windows, for use with Windows 95 and Windows NT.

Astronomy Village: Investigating the Universe™

Level: Grades 9-12/2002	1-pack	MAC/WIN	400.1-43A	\$79.95
Level: Grades 9-12/2002	5-pack	MAC/WIN	400.1-43B	\$299.95
Level: Grades 9-12/2002	10-pack	MAC/WIN	400.1-43C	\$499.95

Astronomy Village: Investigating the Universe™ is a CD-ROM based multimedia program that provides teachers and students with ten complete investigations in astronomy intended to complement and extend the science curriculum in 9th and 10th grade classes. Students, in teams of three, use the Astronomy Village software to conduct investigations in astronomy and learn about the nature of scientific inquiry. The Astronomy Village's interface is based on the village-like appearance of major observatories on mountaintops. Tools available to students include an image processing program, an image browser, and various simulation programs. The simulation programs include a star life cycle simulator, an orbital simulator (Mac only), and a 3-D star simulator (Mac only). Other resources available on this CD for the student research teams include: digitized video clips; images from the Hubble Space Telescope and other instruments; audio clips of astronomers discussing their work; computer animations and graphics; and full text documents such as book chapters, NASA publications, and articles from astronomy journals and magazines.

EOS Science Plan Book w/CD-ROM and Global Change Media Directory and MOPPITT Guide

NP-1999-01-006-GSFC/2001	MAC/WIN	400.1-40	\$5.00
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The Earth Observing System (EOS) Science Plan is the product of leading scientists around the world who are participating in NASA's ESE/EOS program. The purpose of the Plan is to state the concerns and problems facing Earth Science today, and to indicate contributions that will be made toward providing solutions to those problems, primarily through the use of satellite-based observations that will be obtained with EOS satellite and instruments. Within this publication, the reader will find types and quality of data that will be produced from the satellite observations, how they will improve over existing measurement and how the data will be applied to solving the problems described.

ExoQuest

Level: Grades 7-9/2001	1-pack	MAC/WIN	400.1-36A	\$79.95
Level: Grades 7-9/2001	5-pack	MAC/WIN	400.1-36B	\$299.95
Level: Grades 7-9/2001	10-pack	MAC/WIN	400.1-36C	\$499.95

Are we alone in the universe? A multimedia, educational product developed by NASA Classroom of the Future™ uses this question as a framework for integrating current research in astrobiology into the grade 7-9 curriculum. The astrobiology context allows students to explore topics in astronomy, evolution, paleontology, biology, earth science, physics, chemistry, geology and remote sensing. With the cooperation of the researchers involved, ExoQuest takes students on virtual journeys to destinations based on past, present, and future NASA missions. Each investigation poses problems that focus on different areas of research. The ExoQuest curriculum includes twelve activity modules. For more information visit their web site at <http://www.cotf.edu/ExoQuest>

Flight Testing Newton's Laws: The Test Pilot Approach to High School Physics

Level: Grades 9-12	WIN/MAC	400.1-51	\$5.00
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Designed to engage high school students in Newtonian physics as it applies to the real world of flight testing aircraft. This highly interactive program is derived from the Flight Testing Newton's Laws educator guides and companion 2-hour videos coproduced by NASA and the National Test Pilots School. Using extensive narration, animation, QuickTime movies and photographs, the instructors from the National Test Pilots School guide students through 10 lessons covering Newton's three laws of motion, complementary areas of trigonometry, vector addition, weight and balance, and resolutions of forces. Many of the demonstrations were photographed in flight as the instructors control aircraft ranging from gliders to supersonic jets. Flight Testing Newton's Laws videotape is also available for \$24.00 CORE Item #012.0-25V.

Windows 95+; Pentium II or better with 128MB RAM or Macintosh 60830 processor or better w/minimum 32MB of available RAM; OS 8.6+; QuickTime 5+.

GLOBE Program Overview

2001	CD-ROM	400.1-42	\$5.00
Level: Grades 6-12	MAC/WINDOWS '95		

The GLOBE Program Introductory Series CD-ROM is a sampling of a few GLOBE videos, specifically a long and short version of the Program Overview, Water Transparency (a sample science protocol video), and Earth as a System (an educational video). Partners and Program staff use the collection for outreach and promotional purposes.

Liftoff, Space Simulation Series – Part I

Level: For All Ages/2002	WIN/MAC	400.1-50	\$34.95
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ETI's interactive CD-ROM Space Simulation Series puts users in the driver's seat of the most powerful vehicle ever conceived. Through a series of stunning multimedia presentations and hands-on simulations, users will learn what it takes to be an astronaut, to command the Shuttle, to work, walk and live in space. The user will become an integral part of a large team, choosing to actively participate in a number of different roles to complete missions and assignments. Success will depend on knowledge gained to collaborate in problem solving incorporating real-world NASA procedures and timelines. Liftoff provides the user with general space knowledge, standard nomenclature, a virtual tour of the Space Shuttle and simulator familiarization training of the Ascent (Liftoff to Orbit) portion of a mission. As an astronaut candidate, the user learns the role of Commander (CDR) and interacts with the Pilot to complete a successful launch while dealing with problems and emergencies, including a "non-scheduled" landing in Africa. The product includes a comprehensive Teacher's Guide and Resource Listing for educators.

Windows: 32MB or more of installed RAM, Intel Pentium processor, Netscape 4.0 or greater, Microsoft Internet Explorer 4.0 or greater, AOL 4.0 or greater, 16-bit color monitor capable of 800 x 600 resolution, Windows 95, 98, 2000, Me, Windows NT4 or Windows XP, Sound card, 8x CD-ROM or faster recommended. Macintosh: 32MB or more of installed RAM, Power Macintosh Power PC processor (G3 or higher recommended), Netscape 4.0 or greater, Microsoft Internet Explorer 4.0 or greater, AOL 4.0 or greater, 16 bit color monitor capable of 800 x 600 resolution, Mac OS 8.1 or later, Sound card, 8x CD-ROM or faster recommended.

NASA Aerospace Technology Education Resource Guide: Centennial of Flight Edition

Level: Grades K-12/2002	WIN/MAC	400.1-44	\$5.00
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The NASA Aerospace Technology Education Resource Guide CD-ROM provides K-12 educators an easy and concise introduction to NASA aerospace educational resources including web sites, printed materials, television shows, videos and CD-ROMs. This interactive CD-ROM includes colorful descriptions and links to the best NASA aerospace-related educational web sites, and it contains a library of over 1500 educator guides, lesson plans, posters and more. The materials in the library are ready to print without downloading them from the Internet. Very user-friendly product to introduce students and educators to the Centennial of Flight products. For more information visit the Centennial of Flight Commission's Web Site at [http:// www.centennialofflight.gov](http://www.centennialofflight.gov)

System Requirements: Windows 95+ Pentium II or equivalent w/128 MB RAM. Macintosh 60830 processor or better with minimum 32MB of available RAM. OS 7.0+ - Internet Access.

Realizing the Dream: An International Space Station Sampler

NC-2001-05-007-HQ/2001	WIN/MAC	400.1-39	\$5.00
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Provides a wide variety of information about this orbiting research facility: our newest star in the sky, the international Space Station. Meet some of the people who designed and are building the ISS, share the excitement of human space exploration and find answers to some of your questions. Information is presented in every day language and includes information from the following web sites: <http://spaceflight.nasa.gov>, <http://education.nasa.gov>, <http://commercial.nasa.gov>.

Space Weather: Exploring Sun-Earth Connections

Level: Grades 4-12/2001	WIN/MAC	400.1-41	\$5.00
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Space weather is a term that is frequently used to describe the interaction between the Sun and Earth. These interactions can be as benign as a beautiful aurora, or as devastating as an electrical power blackout, the loss of a million-dollar satellite, or even radiation exposure to astronauts and airline flight crews. For more information visit their web site at <http://image.gsfc.nasa.gov>

Studying Earth's Environment From Space

EC-2002-04-007-GSFC/2002

CD-ROM

400.1-46

\$5.00

Level: Grades 9-12 , Undergraduate

This material consists of four modules: Stratospheric Ozone; Global Land Vegetation; Oceanography; and Polar Sea Ice Processes. The modules are designed to increase the use of satellite data in science classrooms by providing lecture materials in HTML for the classroom (including full-color, printable graphics) that are linked to guided-inquiry computer exercises. The current software package used for the computer exercises is a modified version of the Macintosh platform's NIH-Image. This software, called SEE Image, also has been tested and runs on a PC that is equipped with a Macintosh emulator. Recommended for: High school— undergraduate. For more information, please contact their web site at <http://see.gsfc.nasa.gov/edu/SEES>

Earth Update

2003

CD-ROM

400.1-48

\$5.00

Level: Grades 5-Adult

EARTH UPDATE is an interactive, real-time display system of Earth images and data designed for museums and schools and available to the general public as a "museum in a case"! Running from the CD-ROM, the program displays hundreds of images and movies of the best of earth images and data, documented, with web references of how to find out more. Roughly 15% of the material represents "today's data" - weather maps, bioactivity maps, earthquake maps, etc. By copying the software onto a hard drive, you can see "today's data" by downloading today's images free from the internet with a single click. Museums can subscribe to our automatic updating service. Each of the submodules can be run separately, resulting in 6 different kiosks if desired. Over a million visitors have interacted with our software in museum and school settings. This powerful software suite is now available for purchase as a single CD which includes both Mac and Windows versions!

Macintosh: 300 MB of free hard disk space for all of EARTH UPDATE, or 20-80 MB free if you only wish to install one of the spheres. Monitor requirements are 800x600 pixels, with 16-bit color (thousands of colors). No keyboard is necessary for the display - only a trackball or trackpad and clicker. Windows: Windows 95, 98, NT, 2000, and ME, with at least 64 MB of RAM. Sound cards are necessary to hear the effects (but are not necessary for module operation). You need 400 MB free hard disk space for all of SPACE UPDATE; or 50-140 MB if you only wish to show one of the modules. The Windows versions requires Quicktime 4, and a display set to High Color (16 bit). The Windows version is not available in two-screen format.

Space Update

2003

CD-ROM

400.1-49

\$5.00

Level: Grades 5-Adult

SPACE UPDATE is an interactive, real-time display system of Earth and Space Science images and data designed for Museums and Schools. Running from the CD-ROM, the program displays hundreds of images and movies of the best of earth and space science research, documented, with web references of how to find out more. Roughly 5% of the material represents "today's data" - current as of the time when the CD-ROM was burned. By installing the software on a hard drive, you can update the software to truly show "today's data" by downloading today's images free from the internet; or we can update your modules remotely each day (for a monthly charge) to keep your software up-to-date, even if it is in use! (Weather data can be downloaded hourly if desired). Each of the submodules can be run separately, resulting in 7 separate kiosks if desired. After extensive testing in museum and school settings, this software is now ready for release in both Mac and Windows versions!

Macintosh: 450 MB of free hard disk space for all of SPACE UPDATE, or 50-140 MB free if you only wish to show one of the modules (Sky Tonight is the largest because of the skyview movies included). Monitor requirements are 640x480 pixels, with 16-bit color (thousands of colors). No keyboard is necessary for the display - only a trackball or trackpad and clicker. Windows: Windows 95, 98, NT, 2000, and ME, with at least 64 MB of RAM. Sound cards are necessary to hear the effects (but are not necessary for module operation). You need 400 MB free hard disk space for all of SPACE UPDATE; or 50-140 MB if you only wish to show one of the modules. The Windows versions requires Quicktime 4, and a display set to High Color (16 bit). The Windows version is not available in two-screen format.

CD-ROM/RESEARCH MATERIALS

Apollo 11 Volume 3: The NASA Mission Reports

Level: Grades 9-12/Adult/2001

Book w/**DVD**

400.2-22

\$24.95

On July 24th 1969 the crew of the historic first manned mission to the moon and their spacecraft Columbia arrived on the deck of the U.S.S. Hornet. The flight of Apollo 11 had been an unqualified triumph. The goals laid out by President John F. Kennedy had been attained. Neil Armstrong and Buzz Aldrin had walked on the dusty plains of the Sea of Tranquility and had returned safely to the Earth with a treasure trove of unparalleled scientific information. Now it was the turn of the world's scientific community to try and place all of this new knowledge into perspective. Hundreds of people around the world jostled for access to scraps of the lunar rocks and dust. As always NASA's own managers, engineers and scientists were the first to pore over the details in an effort to maximize the return from future missions. Just prior to the launch of Apollo 12, NASA issued the Apollo 11 Mission Report. The document contained everything from the crew's observations about the reflection off their faceplates to the interaction between the Lunar Module's footpads and the dusty lunar surface. In Apollo 11 - The NASA Mission Reports Volume 3 the first comprehensive study of man's first mission to another world is revealed in all of its startling complexity.

Apollo 15: The NASA Mission Reports

Level: Grades 9-12/Adult/2001

CD-ROM: Windows

400.2-17

\$17.95

This book includes a CD-ROM with the entire EVA video footage from Apollo 15 as well as thousands of still images and QTVR pans of Hadley Base. The legacy of the Apollo program is rich in outstanding discoveries and accomplishments but none more so than the first fully equipped lunar landing mission. Apollo 15 was the first moon-landing to venture into the treacherous terrain of a lunar mountain range. After a perfect pinpoint landing, astronauts David Scott and James Irwin explored the mysterious Hadley Rille with the benefit of their electric lunar rover. Scott and Irwin had undergone extensive training in the science of geology and were to find the oldest rock ever to be brought back from the moon. The so-called "Genesis" rock would answer many of man's age-old questions about the origins of the moon. In Apollo 15 - The NASA Mission Reports the remarkable fourth lunar landing is explained in great detail with documents rarely seen by the public. PLEASE NOTE: Material is very technical, excellent for research projects or those with extreme interest in subject, not for general interest level.

Apollo 16: The NASA Mission Reports, Volume One

Level: Grades 9-12/Adult/2002

CD-ROM: Windows

400.2-24

\$19.95

The landing site selected for the crew of Apollo 16 was in the lunar highland area of Descartes. NASA chose to send John Young to command the fifth lunar landing mission. Young had as much or more flight experience than any other member of the astronaut corps. He had circumnavigated the moon on Apollo 10 and he had flown two Gemini missions. Young would later go on to be the first commander of the Space Shuttle. The Descartes landing site was chosen because it appeared to be of volcanic origin. If it was, it might reveal secrets about the origins of the Earth. For three days Young and Duke embarked on their rover, away from the Lunar Module "Orion", through rugged landscapes, in search of the origins of our world. Meanwhile Ken Mattingly shot hundreds of photographs and probed the moon's magnetic field from the Command Module "Casper". Back on Earth the political climate was beginning to turn against NASA and the remarkable risks and exploits undertaken by the crew of Apollo 16 went almost unnoticed by the American public. The three intrepid explorers and their spacecraft harvested a wealth of new data about the Earth-Moon system in an almost flawless performance of skill and bravado. Compiled here are many important documents about the mission including the complete debriefing in the crew's own words. PLEASE NOTE: Material is very technical, excellent for research projects or those with extreme interest in subject, not for general interest level.

Apollo 17: The NASA Mission Reports, Volume One

Level: Grades 9-12/Adult/2002

CD-ROM: Windows

400.2-29

\$19.95

It was just past midnight in the early morning hours of December 7th 1972 when the last manned Saturn V roared from the launch pad at the Kennedy Space Center. Strapped into the crowded Command Module were Commander Eugene Cernan, Command Module Pilot Ron Evans and Lunar Module Pilot/Geologist Harrison Schmitt. Their destination was a steep sided lunar valley on the edge of the Sea of Serenity, known as Taurus-Littrow. What this crew hoped to do was increase man's store of knowledge about our nearest celestial neighbor by taking along a trained scientist for the first time. Harrison "Jack" Schmitt was a fully qualified geologist who had been the man who contributed to all of the Apollo astronaut's geological training. Now it would be his turn to witness first-hand the geology of another world. Accompanying Schmitt was another astronaut "rookie", CMP Ron Evans, who would be left in lunar orbit to map out the moon in unprecedented detail. Presiding over this highly trained crew was veteran

Gemini and Apollo astronaut Gene Cernan, returning to the moon for a second time this time with the intention of living there for three days. Apollo 17 was the culmination of man's greatest program of exploration. An unparalleled triumph of planning and technology flown by a team of professionals with expert precision. This book contains many of the internal NASA documents from this extraordinary voyage made commercially available for the first time. PLEASE NOTE: Material is very technical, excellent for research projects or those with extreme interest in subject, not for general interest level.

Arrows to the Moon

Level: Grades 9-12/Adult/2001	Book	400.2-19	\$19.95
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On February 20, 1959, the Canadian government shut down the CF-105 Avro Arrow jet interceptor program, putting the cream of Canada's aerospace engineering talent out of work. Many of the Avro engineers had just arrived in Canada from Great Britain. A brand new organization called the National Aeronautics and Space Administration was charged with putting U.S. astronauts into space, and in 1959 it desperately needed engineering talent. Within ten weeks of the demise of the Arrow, 25 Avro engineers were working for NASA, and another seven joined them later. Other Avro engineers found work with the aerospace contractors that built spacecraft and boosters for NASA. A little more than 10 years later, U.S. astronauts were standing on the surface of the Moon in the climax of one of the greatest stories of technology and exploration in human history. Arrows to the Moon tells for the first time the story of the Canadian and British engineers from Avro Canada, who played key roles in putting Americans on the Moon and in building today's U.S. space program, including the space shuttle and the International Space Station. Other Canadian contributions to Apollo and a chapter on the Canadian space program are also included. Arrows to the Moon is the final chapter in one of the most compelling stories in Canada's history. Tells how the demise of Canada's national dream contributed to one of the greatest triumphs in American history. PLEASE NOTE: Material is very technical, excellent for research projects or those with extreme interest in subject, not for general interest level.

Conquest of Space, The

Level: Grades 9-12/Adult/2002	Book	400.2-26	\$21.95
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"David Lasser stands as one of the least-known but extraordinary pioneers of spaceflight. In 1930 he founded the American Interplanetary Society (today's AIAA) - the same year he wrote this book - the first book ever written in the English language to address the notion of spaceflight as a serious possibility. This book has not been in print since 1931 and yet it still stands up to scrutiny. The lucid style with which Lasser explains the basic concepts of rocketry makes it a delight for anyone to read. Only a handful of errors creep into the text and all of those were based on the best information available at the time. The Conquest of Space is a milestone work of spaceflight literature and was state of the art in 1931. No space enthusiast's library is complete without it." Robert Godwin (Editor - The NASA Mission Reports) "My encounter with The Conquest of Space, soon after its publication in 1931, was one of the turning points in my life, and I suspect, not only of mine..." Sir Arthur C. Clarke. PLEASE NOTE: Material is very technical, excellent for research projects or those with extreme interest in subject, not for general interest level.

Creating Space - The Story of Space Told Through Models

Level: Grades 9-12/Adult/2002	Book	400.2-25	\$29.95
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The Heavens - and trying to get there - have always intrigued man, and have been included in our artwork throughout all of history. In recent years they have been the subject of countless books, articles, radio and television shows and films, and have more and more featured the practical method of achieving these dreams - Spaceships. Creating Space takes us on a journey through the history of the space age, up to the present and beyond. From the advent of the "space race" with the V-2 rocket of World War II to the International Space Station and the future, a complete and detailed chronicling of vehicles is given, side by side with pictures and details of models that depict the multitude of aircraft and spacecraft developed throughout the world. In addition, extensive appendices provide details of all of the space-related models ever made and the many manufacturers and distributors who have supplied them - all in the words of an experienced professional insider. Mat Irvine worked in the BBC Visual Effects Department for 20 years, contributing to many projects including Doctor Who, Blake's 7, Edge of Darkness, the various NASA flights, and many science and space-oriented documentaries and programs. Creating Space is presented in 12 chapters which logically group together the history, the vehicles and the models into logical and meaningful categories. This book will be equally valuable to space enthusiasts, model makers, and space historians. PLEASE NOTE: Material is very technical, excellent for research projects or those with extreme interest in subject, not for general interest level.

Gemini 7: The NASA Mission Reports

Level: Grades 9-12/Adult/2002

CD-ROM: Windows

400.2-21

\$17.95

On December 4, 1965, NASA launched the Gemini 7 spacecraft, on a Titan II booster, putting Frank Borman and James A. Lovell, Jr. into Earth orbit. This mission set what was then a new record for long duration manned space flight; 206 revolutions (330 hrs, 35 mins). During this 14-day period the Gemini 7 mission achieved some remarkable firsts: manned station-keeping (formation flying) and proximity operations (relative maneuvering in orbit) with the Gemini 6 spacecraft, and performed more than 20 scientific experiments. Includes: Windows CD-ROM featuring MPG video, orbital photography from the Gemini 7 mission and more.

Lost Spacecraft – The Search for Liberty Bell 7

Level: Grades 9-12/Adult/2002

CD-ROM: Windows

400.2-27

\$28.95

Lost Spacecraft - the Search for Liberty Bell 7 describes the exploration of two unique and dangerous environments - space and underwater - and how the paths of two men, one living and one dead, crossed in the recovery of the Liberty Bell 7 spacecraft. "Lost Spacecraft" focuses on two periods, one beginning in 1959, the other in 1985, interweaving the stories of Project Mercury, Gus Grissom and his ill-fated Mercury flight, on-going developments in deep ocean exploration, and Curt Newport's 14-year obsession to raise the sunken space-age Titanic from the depths of the Atlantic Ocean. Also told is how Newport's team, against staggering odds, managed to find the phone-booth sized space vehicle during his harrowing 1999 expedition, only to see their recovery vehicle and Liberty Bell 7 ripped from their grasp by the forces of nature. Newport later recovered Liberty Bell 7 during what remains the deepest commercial salvage operation in history, returning Grissom's craft to Cape Canaveral, Florida thirty-eight years to the day after Grissom blasted off his tiny launch pad. However, the prevalent theme running through "Lost Spacecraft" is how simple luck almost rivals technical ability when exploring any deadly environment, whether it be the silent void of low-Earth orbit or the crushing cold of the abyss. PLEASE NOTE: Material is very technical, excellent for research projects or those with extreme interest in subject, not for general interest level.

On To Mars – Colonizing a New World

Level: Grades 9-12/Adult/2002

CD-ROM: Windows

400.2-23

\$19.95

In 1998 Dr. Robert Zubrin brought into being the Mars Society, and thousands of people from around the world have flocked to his banner. People from all walks of life have shown support for the exploration and colonization of Mars. Each year the Mars Society holds its annual conference, when experts and enthusiasts can meet to present and exchange ideas and information. A wide variety of the many papers presented from the first four years' conferences have been chosen and then collected together in one volume. The future of mankind lies with the colonization of other planets, and eventually other solar systems, and colonizing Mars is the essential first step. With its ever-growing population and dwindling resources, the end of Earth's time as the sole home of humanity is drawing near. In a life where most of us spend the majority of our time in the day-to-day activities of simply surviving, the people of the Mars Society are looking beyond the immediate future to the needs of the human race as a whole. This embodies a definite sense of social responsibility. Although some aspects of exploring and colonizing Mars still need refining and fine tuning, the lion's share of the technology and the understanding of the human condition are already in existence. The major missing factor is simply the realization and the commitment necessary to begin. The people of the Mars Society are working to educate and convince the political powers, the industry leaders, and you and me. We all have a stake in this. Many of the diverse specializations and concerns of Mars missions are introduced and explained in this book. Members of the Mars Society share with us their ideas, their knowledge, and their dreams, and encourage us to understand and commit to an important undertaking in the future survival of mankind. PLEASE NOTE: Material is very technical, excellent for research projects or those with extreme interest in subject, not for general interest level.

Rocket and Space Corporation Energia

Level: Grades 9-12/Adult/2002

CD-ROM: Windows

400.2-18

\$19.95

Celebrating the 40th anniversary of manned space flight. For the first time ever available in the West a complete pictorial history of the Russian Space Program from 1946 to the present day all in full color. On April 12, 1961 Russian cosmonaut Yuri Gagarin became the first human in space. To celebrate this momentous event Apogee Books, in conjunction with Rocket & Space Corporation Energia, is proud to present, as part of our critically acclaimed series on space flight, our first book about the Russian Space Program. PLEASE NOTE: Material is very technical, excellent for research projects or those with extreme interest in subject, not for general interest level.

Unbroken Chain

Level: Grades 9-12/Adult/2002

CD-ROM: Windows

400.2-20

\$26.95

Anyone who has ever read a book about the space program or watched any of the launches of the 1950's through the 1980's knows that Guenter Wendt was the last person to tuck the astronauts into their couches and shake their hands before shutting the hatch. The man was there and saw and heard it all. Guenter takes us on a journey from 1955 until his retirement in 1989. He spins tales about the astronauts and their ongoing "gotcha's", troubles with various contractor managers, monkey business with Ham and Enos, and the world's perception of the U.S. Space Program during its heyday. Not since Gene Kranz wrote "Failure Is Not An Option" have we been treated to so many behind the scenes stories and anecdotes. We get to hear the stories of someone wanting to shoot the MR-1 launch vehicle with a 30.06 when it refused to take off, Alan Shepard's pad antics involving a German army helmet, feces throwing chimpanzees, and the ongoing battle to keep the entire pad area safe from all the toxic gas and explosives that surrounded that area. Guenter and Russ explain that one little break in "the chain" could have disastrous effects. This proved true during the Apollo 13 explosion in space as well as the Challenger launch disaster. Guenter is a man of great passion about his job, the space program in general, and the country he adopted back in 1955 when he became a U.S. Citizen. PLEASE NOTE: Material is very technical, excellent for research projects or those with extreme interest in subject, not for general interest level.

Women Astronauts

Level: Grades 9-12/Adult/2002

CD-ROM: Windows

400.2-28

\$21.95

Have you ever wondered what it's like to be an astronaut? To blast-off into space and float above the Earth? "Women Astronauts" is a must for any girl or young woman who wants to learn about women astronauts, what they do, and how they got to where they are today. How did other women become astronauts? Read about every woman who has ever flown into space. This book is packed with exciting stories and interviews with many past and current women astronauts. Read about their childhood, training, everyday lives, and of course, their actual missions into space! How can I become an astronaut? Is your future in space? Find out what it takes to become an astronaut, about the selection process, training, and what it's like to live and work as an astronaut in space, and here on Earth. How can I feel like an astronaut now? Find out where you can train like an astronaut, learn about space, and get a taste of Astronaut ice cream. A guide to books, web sites, space stuff, and space places you can visit. What's the history of "Women Astronauts"? In 1963, Cosmonaut Valentina Tereshkova was the first woman in space. But few people know that several American women also tried to get into space in the early 1960's but never became NASA astronauts. Read their story and how attitudes towards women in space changed with the 1978 selection of six women astronauts, including Sally Ride, and Biochemist Shannon Lucid. Pop the CD-ROM into your computer and watch America's first woman astronaut Sally Ride rocket into space, Shannon Lucid float on the Mir Space Station, and Susan Helms work on the International Space Station. Fly through the ISS. Watch interviews with several women astronauts. "Women Astronauts" by Laura S. Woodmansee is a fun, inspirational book for girls and young women and anyone interested in space exploration and what it's like to be an astronaut. Exclusive Interviews with Bonnie Dunbar; Assistant Administrator Johnson Space Center, Ellen Ochoa, Kalpana Chawla, Anna Fisher, Ellen Baker, Linda Godwin, Heidi Piper and Eileen Collins. PLEASE NOTE: Material is very technical, excellent for research projects or those with extreme interest in subject, not for general interest level.

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